POWER SUITE

Version 10 Addendum Manual

TRIVISION GEOSYSTEMS LTD.
The Intelligent Geological Software Solution
Suite 314, 602 – 11th Avenue S.W.
Calgary, Alberta T2R-1J8
Phone: (403) 777-9454 Fax: (403) 777-9455
Website: www.powerlogger.com Email: info@powerlogger.com

Overview

We have added the ability for the user to **Export and Import their INI settings.** This would include their favorite's lists, window placements, printer settings, printed settings, toolbar positions, % lithology sort order, backup folders, last opened wells, most of their System Options settings etc. This utility will help on the initial setup of our application on a new computer with a new install or upgrade.

We have added another **Printing Method that will print the Well End and Morning reports to a Word for Windows ™ format.** These reports can be easily edited and formatted to the report formats that the user desired so now you can distinguish your reports from others that use our system. Also gave the AM reporting reports printing tool a little more functionality where the user can easily add Casing, Bit Record and Survey data to make the AM reports a lot more complete by simply clicking a check box.

We have completely revamped the **Curve Editor window** so the user can now utilize the windows functionalities to select all the data between two points (ie SHIFT Key) or indicate individual values (CTRL Key) or even select all the values in a curve and deleting them easily.

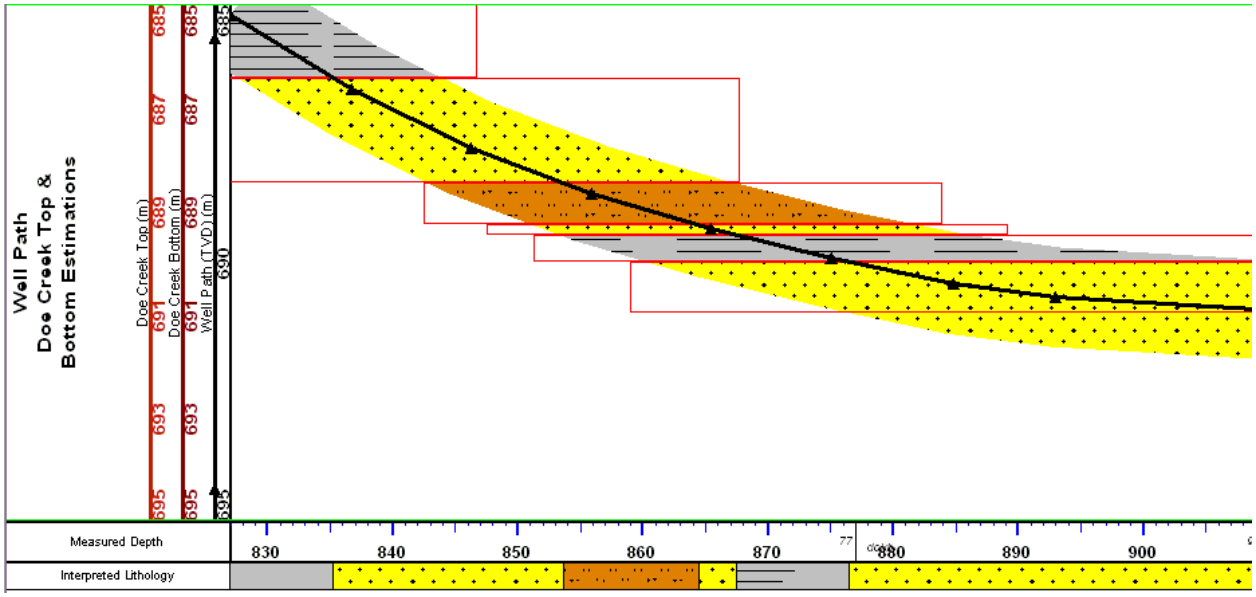
We have added the ability to **turn off the line separating the track borders in the header** to go along with the main log portion that had been implemented in previous versions.

We have added some **Generic Symbol layers** (both Non bed and bed restricted**)** to Power*Core where the users can add and build symbols for any Data type that is not included with the software. It has all the functionalities of the Sedimentary structures layer as to give you an example. The user can build as many data groups as they wish to show their data on a Core log.

With this new layer we have also added the **ability to populate a favorites** list for any User defined Generic Symbol category. This can be found with the other favorites list that has been accommodated in the System Options Favorites Tab.

We have revised the **Metafile Options** window to be able to rename both Long and Short names for any user defined symbols. We also retain any of the user defined custom colors that were used to draw with during the symbol creation process.

We have added another **Curve fill layer** which will utilize the interpretive lithology and wrap that lithology around the Well path curve. The revolutionary part of this is that we are now able to define the bedding angle contacts and the extents of the beds over any depth. This will greatly enhance any horizontal log presentation and will do so with minimal
effort.



We have added a generic **Change layer**. This can be used for Energy Sea level or any other data type that can be represented with a curved arrow.

We have added another **Alternate Core Header** that will give the user more information in the header as well as a way to print the header in the Print Log window

We have added an additional functionality so that the user to **drag and drop Casing display data** anywhere on the layer.

We have added an additional functionality so that the user to **drag and drop Bit Record display data** anywhere on the layer.

We have added an additional functionality so that the user to **drag and drop Formation Top display data** anywhere on the layer.

We have added an additional functionality so that the user to **drag and drop Directional Survey display data** anywhere on the layer.

We have added an additional functionality so that the user to **drag and drop Graphics** anywhere on the layer.

We have added some more functionality to our Curve displays. If you have utilized Point Indicators on you curve layer (with or with the curve line style) we have added those Indicator Points to the Track header. If you have a curve scale change we will now **draw the curve from and to the scale change depth** and **indicate the scale change depth** with a solid line that can be turned on and off by the user. This can be done in the layer configuration window. We have also given the user the control to change the line color and thickness of the Scale Change Curve Indicator through the right click curve pop out menu. Also if a linear curve wraps off scale for a second time and pegs to the track border we can now indicate the **off scale curve values** on the layer. As always the user will have control of this functionality and also the control of the font that is used to display the data.

We have also given the user **full control on the display for all of the fonts that are used on the log**. With this version we have added the Core box data display, Core Sample Code, off scale curve values, Generic Category verbiage, Sidewall Core layer font, MDT layer font, Casing String and Date layer fonts.

We have added the ability to **delete a line** in the Annotation right click menu options.

We have added some more functionality to the **Accessory portion of the Detailed Rock type builder**. We have given the user the ability to **move accessories** as well as **delete multiple accessories** at one as well as define an are **to delete accessories within an area** for those that are hard to find on a right click delete option.

We have added some **revisions** to the drop lists in the **Rock Type Builder**. In the **Sample Quality List** we have added Rubble to help out our core loggers. We have also added Preserved and Missing to the **No Data list** and last but not least we have added Questionable and Not visible to our **Contacts list**.

We have added a **TVD Thickness field to the Formation Report**. This can be calculated automatically for you if you have a formation top that is deeper than the top you would be calculating for. We have revamped all the reports to also include this field.

We have added the ability to export everything at once and includes all the well data, the user defined symbols, the generic categories, the geological expansion dictionary and all the favorites lists, the window and toolbar placements and all the things determined in the system options window. This will make upgrading and migrating from one computer to another very simple.

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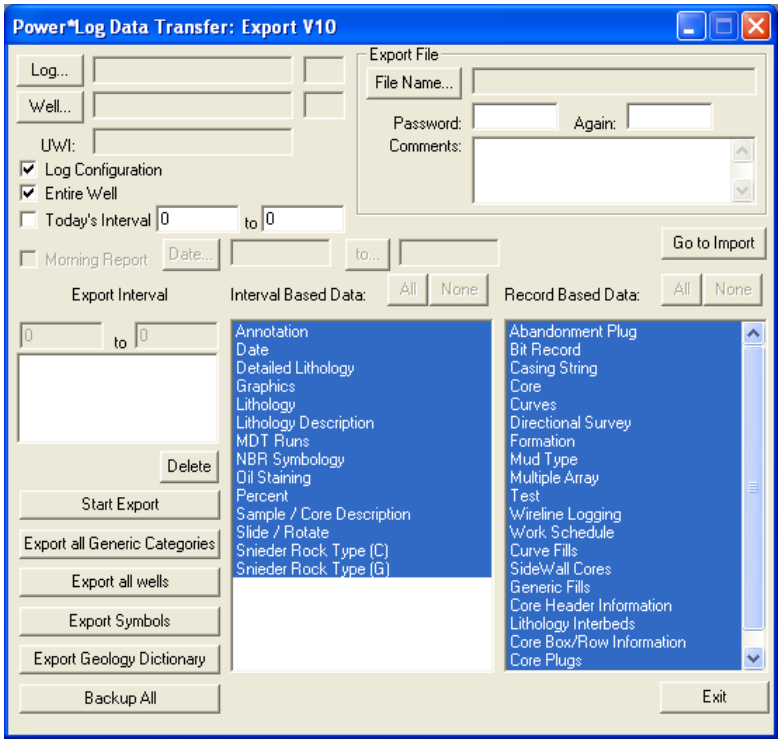
Revised Data Transfer Export Utility

New - Exporting everything at one time…

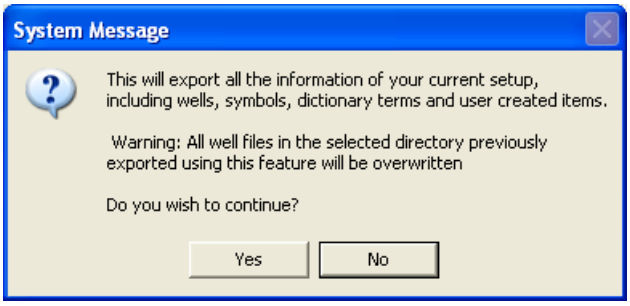
This would include all the Well data, Generic Categories, Well Symbols, Geological Expansion Dictionary, Favorites and all the Power*Suite initialization files .

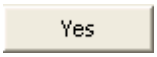
1. Sele**ct Import/Export**, under the **File** menu selection, and then select **Export Log/Well** from the sub-menu.

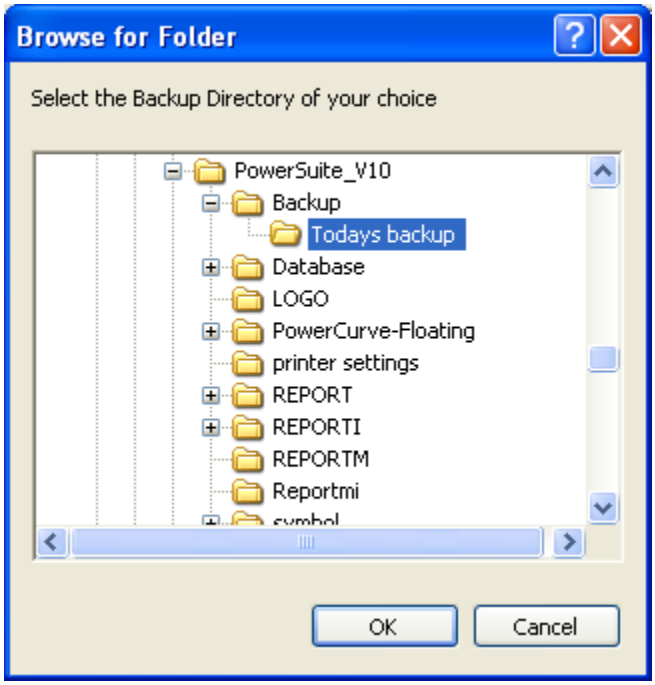
   Or, you can **click** on the **Export Log / Well button** on the Toolbar.



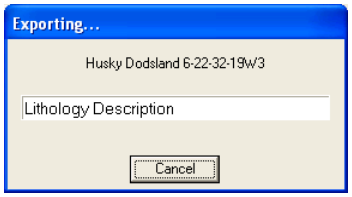
2. **Click** on the **button**. This will activate a system message.


System Message
This will export all the information of your current setup, including wells, symbols, dictionary terms and user created items.
Warning: All well files in the selected directory previously exported using this feature will be overwritten
Do you wish to continue?
Yes
No

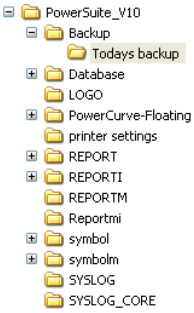
3. **Click** on the  **button**. This will activate a Choose Directory window. You may wish to create a new folder for these well. This cannot be done from this window and must be done through Windows Explorer or My Computer. In the example an old wells folder is selected.

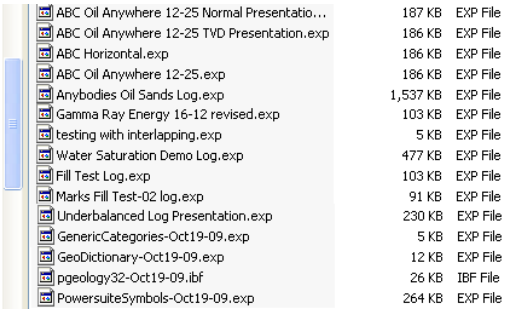


4. **Click** on **the drive** and **directory** where you wish the well data to be exported to. Then, **click** on the OK **button.** This will activate the Exporting window.



5. When the export all well data is finished a System Message will be activated as shown below. **Click** on the OK **button**. Below you will view the folder created in the **PowerSuite V10 \ Backup \ Todays backup** with files and their names.




ABC Oil Anywhere 12-25 Normal Presentatio... 187 KB EXP File
ABC Oil Anywhere 12-25 TVD Presentation.exp 186 KB EXP File
ABC Horizontal.exp 186 KB EXP File
ABC Oil Anywhere 12-25.exp 186 KB EXP File
Anybodies Oil Sands Log.exp 1,537 KB EXP File
Gamma Ray Energy 16-12 revised.exp 103 KB EXP File
testing with interlapping.exp 5 KB EXP File
Water Saturation Demo Log.exp 477 KB EXP File
Fill Test Log.exp 103 KB EXP File
Marks Fill Test-02 log.exp 91 KB EXP File
Underbalanced Log Presentation.exp 230 KB EXP File
GenericCategories-Oct19-09.exp 5 KB EXP File
GeoDictionary-Oct19-09.exp 12 KB EXP File
pgeology32-Oct19-09.ibf 26 KB IBF File
PowersuiteSymbols-Oct19-09.exp 264 KB EXP File

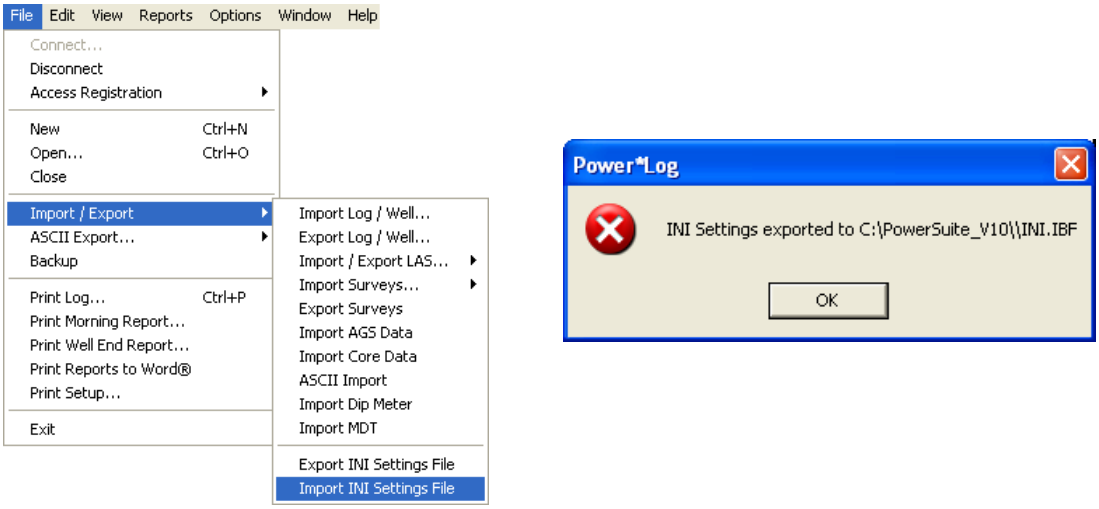
You will notice that the well export will have the log names, and the other exports associated with this backup all feature will have a time stamp after the file type.

New - Export INI Settings

This will allow the user to export all the user's favorites' lists, the placement of the toolbars, window placements and default settings for another user to import to have all the settings the original user has set up.

How to Export INI Settings

1. To access the INI Export window, click on **Import / Export** under **File** to activate the pop-out menu and then select **Export INI Settings.** This will activate the Export INI Settings file window as shown below and tells you the folder it has been saved into as IBF file extension.

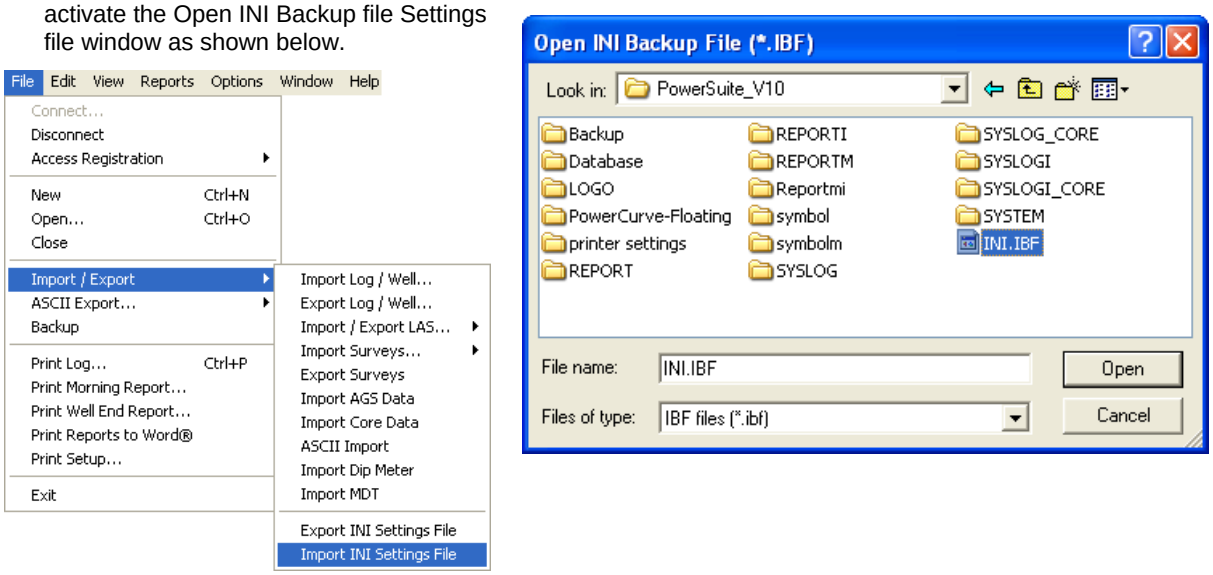


New - Import INI Settings

This will allow the user to import all the user's favorites' lists, the placement of the toolbars, window placements and default settings from another user who has exported this file and to have all the settings the original user has set up.

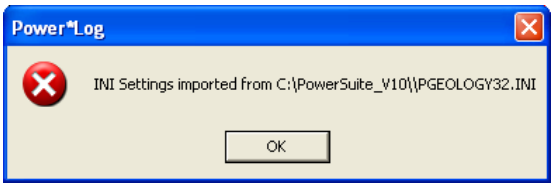
How to Import INI Settings

1. To access the INI Import window, click on **Import / Export** under **File** to activate the pop-out menu and then select **Import INI Settings.** This will activate the Open INI Backup file Settings file window as shown below.



2. Select the file that has been exported and click on the

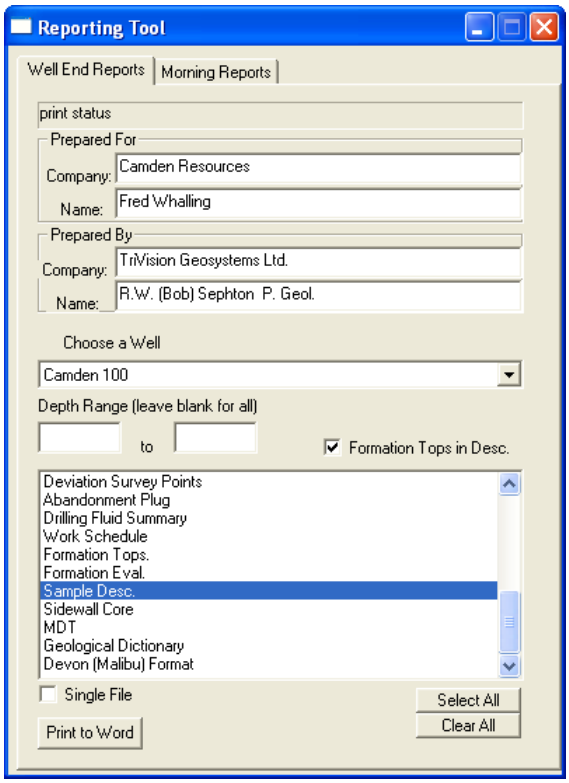
button. This will result in a system message that the file has been imported successfully as shown below.



New - Print "Well End and AM" Reports to Word Format

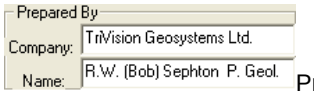
This printing method has been implemented to facilitate the printing of the Geological reports to a different format other than the Crystal Reports generated to this point in time. Most of the reports are very similar but are not just text fields that our users have had some problems with when they are printed to word format. This new geration of reports should be easily formatted to their particular reporting format.

1. **Click** on **Print Reports to Word**, under the **File** menu **selection**, to activate the **Print Reports to Word** window shown below. The user can also click on the Shortcut button located on the toolbar.



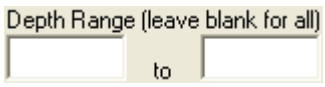
Overview of Well End Reports Tab Window

Prepared for Fields are to be filled in for the Title page report. Type in the Company Name you are working for in the company field and the Person's name you are working for or is receiving the reports in the Name field

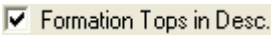


Prepared by Fields are to be filled in for the Title page report as well. Type in your Company Name in the company field and your name in the Name field

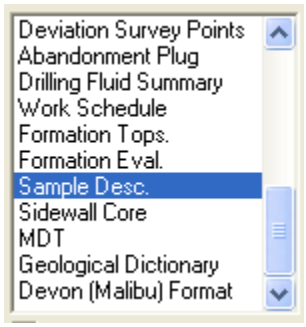
This field defaults to the well that is open when you enter into this application. The user can utilize the drop arrow to pick any well they have in their database.



The Depth Range fields are available to print a portion or depth interval of the Sample or Core descriptions as well as Devon Malibu Format Moring Reports. Leave these fields blank to print them all.



Activate this check box if you want to include the Formation tops in the Sample or Core Descriptions report.



This field gives the user to identify which well end reports they would like to print and they can also identify multiple reports to print at once. Click on the report name to activate or highlight the report to be printed and Click again to deactivate the report. Scroll through the list to identify which reports you wish to print.

Single File Activate this check box if you wish to print multiple reports to a single file. Or conversely deactivate this check box if you want multiple files created.

Select All This button will highlight / select all the reports and you can activate the reports you do not wish to print.

Clear All This button will dehighlight / deselect all the reports and you can activate the reports you wish to print.

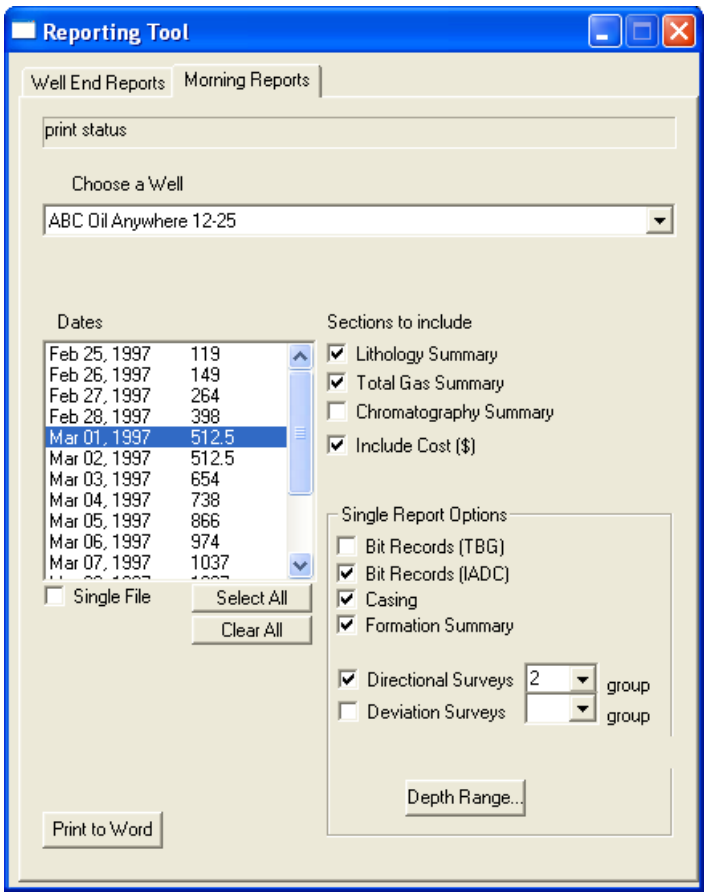
Print to Word This button will activate the printing process and create either single or multiple files. The documents created will be Document 1 Document 2 etc.

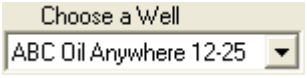
How to Print Well End Reports to Word Format.

1. **Click** on **Print Report to Word**, under the **File** men**u selection**, to activate the **Print Reports to Word** window.

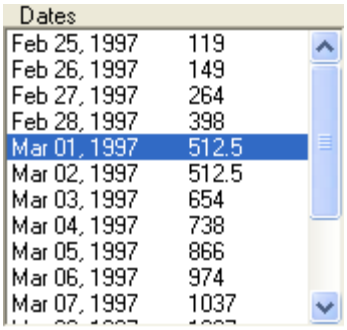
   The user can also **click** on the shortcut **button** located on the toolbar.
2. **Choose** the **well** you wish to create a report for from the selection box if the default well is not the one you want to print.
3. Highlight the reports you wish to print in the **Reports** field by c**licking on them once. To select/highlight all of the reports, click** on the Select All **button**. To deactivate all of the reports, **click** on the Clear All **button**. . **If you are printing sample or core Descriptions select if you wish to print tops or all the descriptions**.
4. **Click** on the Print to Word **button** to create the reports. This will activate your copy of MS Word application and you can view, customize and save these reports.

Overview of Morning Reports Tab Window



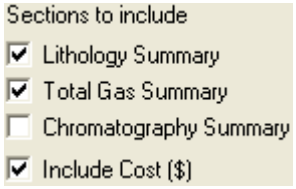


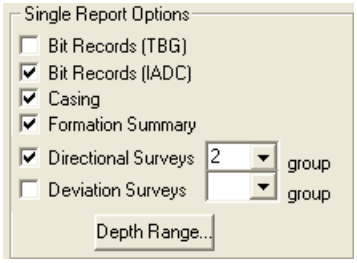
This field defaults to the well that is open when you enter into this application. The user can utilize the drop arrow to pick any well they have in their database.



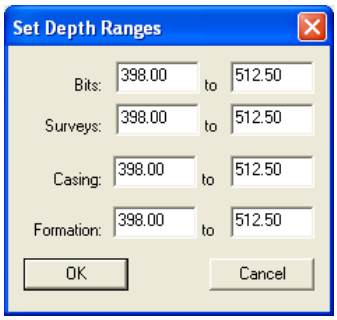
This field gives the user the ability to identify which Morning reports date they would like to print. The user has the ability to print one or more report dates. Select or deselect them by clicking on them once.

This identifies which portion of the report they would like to print. The choices will be activated with a check box. This information is entered into the Morning reports located under the Reports pull down menu in Power*Log / Core or Curve.





This portion of the window allows the user the ability to pick and choose which of the Well End reports they would like to include with the printed am report. They include Bit records Casing Formations and Surveys. All these records default to the depth interval from the previous morning report but can be modified by the user.



This Depth Range... button activates the Set depth range window so the user can decide what ranges of well end report data to include with the AM report printing. The default is the depth from the previous Am report and the one you have selected to print.

Single File Activate this check box if you wish to print multiple report dates to a single file. Or conversely deactivate this check box if you want multiple files created.

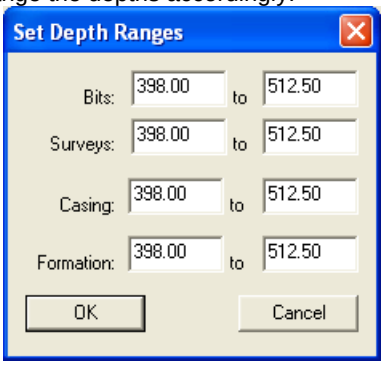
The Select All button will highlight all the am report dates.

The Clear All button will deselect all the am report dates.

The Print to Word button will activate the printing process and create either single or multiple files. The documents created will be Document 1 Document 2 etc.

How to Print Morning Reports to Word Format.

1. **Click** on **Print Report to Word**, under the **File** menu **selection**, to activate the **Print Reports to Word** window.
   The user can also **click** on the shortcut **button** located on the toolbar.
2. **Click** on the **Morning Reports tab** to activate that portion of the window.
3. **Choose** the **well** you wish to create a report for from the selection box if the default well is not the one you want to print.
4. **Highlight** the **report dates** you wish to print in the Dates field by c**licking on them once. To select/highlight all of the reports, click** on the Select All **button**. To deactivate all of the reports, **click** on the Clear All **button**.
5. **Select** the **report options** from the appropriate check boxes.
6. **Select** from the Single Report Options which data from the **well end reports** you would like to include in this printed AM report.
7. If you have selected some Well End report data to be included with the AM report printing and you would like to change the default depths to search for a different interval of data then you would **Click** on the Depth Range... **button** to activate the window and change the depths accordingly.

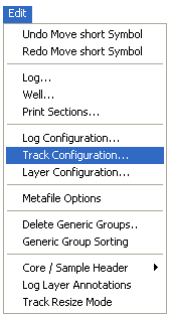


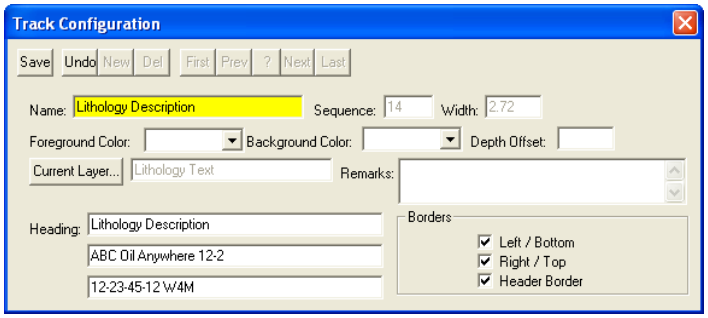
8. **Click** on the OK **button** to return to the main window.
9. **Click** on the Print to Word **button** to print the AM report to word format. This will activate your copy of MS Word application and you can view, customize and save these reports.

Revised - Track Configuration

This is the only window that allows you to offset tracks* and add information to individual track headers. This window will also allow the user to turn off the outside border of any Track.
A track is a portion of the log that contains one or more layers of information. The track configuration window can be used to edit the name of the track, the track header, and the track's depth offset in relation to the rest of the tracks within the log. The user must keep in mind that any track can be offset with respect to its actual depth. A positive integer will increase the depth of the track, while a negative integer will decrease the depth of the track. To be able to work within or on a track, the track must be **ACTIVE**: highlighted with a green border. The Track configuration will also allow the user to turn off or on the track borders between tracks.
***Track Offsetting** is only available to those users possessing the **Correlational Module**.

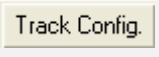
Shortcut:
This is the Track Configuration window:





Editing the Active Track Configuration…

1. **Click** on the desired **track** to make it active: highlighted with a green border.
2. **Click** on **Track Configuration**, under the **Edit** menu selection, or **click** on the **Track Configuration button** on the **Toolbar** to activate the **Track Configuration** window shown above.

> **Note:** You may also access the **Track Configuration** window by clicking on the  **button** within the **Log Configuration Builder** window, once you have highlighted the track you wish to edit.

Adding a Track Header

3. Type the desired **Header** information into the **Heading** fields within the window.

Offsetting or Depth Shifting a Track: (Correlation Module only)

4. Type the offset figure into the **Depth Offset** field within the window.

> Note that a positive integer will increase the depth of the track (move it down), while a negative integer will decrease the depth of the track (move it up).

Changing Track Borders for the main log

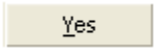
5. The user can turn off and on the borders between tracks on any log. The Track border is turned on when the check box is activated or selected and is turned off when the check box is deactivated or unselected .

Changing Track Borders for the track header

6. The user can turn off and on the borders between tracks on any log. The Header border is turned on when the check box is activated or selected and is turned off when the check box is deactivated or unselected .

> **Note**: To turn off the border between two tracks the left or bottom selection of one track and the right or top selection from the adjacent track must be deactivated or unchecked.

7. **Click** on the

button or press ALT-S.
8. A system message will appear telling the user *"Record saved successfully. Do you wish to Exit?"* **Click** on the 

button to exit the window and view your changes.

Field Restriction Table:

Name	30	Character	Mandatory
Sequence	5.0	Numeric	Optional
Width	3.2	Numeric	Optional
Depth Offset	5.2	Numeric	Optional
Current Layer	30	Character	Optional
Remarks	100	Character	Optional
Heading (1, 2, & 3)	30	Character	Optional

Revised Layer Configuration

The Layer is the lowest level of a log. A layer is part of a track, which in turn is part of a log. The Layer Configuration window allows you to edit all aspects of any given layer. You have access to all layer attributes, including curve attributes, layer grid styles and patterns and layer display controls. You may also control the display format and depth offset of layers in this particular window. None of the layer data types use all the layer controls.

A layer is a set of information that is displayed on a track. A track can consist of one or more layers. The layers are positioned within a track and are superimposed or stacked on top of one another, if there are multiple layers in a track. You are able to show/hide the layers and adjust the layering order. This can be done in the Layers Organizer window located under the view pull down menu.
You can only work with one layer at a time and we call this the **active layer** on an **active track**. Layer information is restricted to the **Primary Well** of your log, unless you have the **Correlational Module**, which allows a layer to be pointed at any well in the database. A layer can access any type of information in the **Primary Well** or any other well in the database and display it within the log. A layer can be offset on its depth axis to make correlations between wells relatively simple.
In the **Layer Configuration** window, you are able to associate specific **Annotation Groups** with **Annotation** layers via their **Annotation Group ID**. The user can also associate specific **Data Groups** with a specified layer.

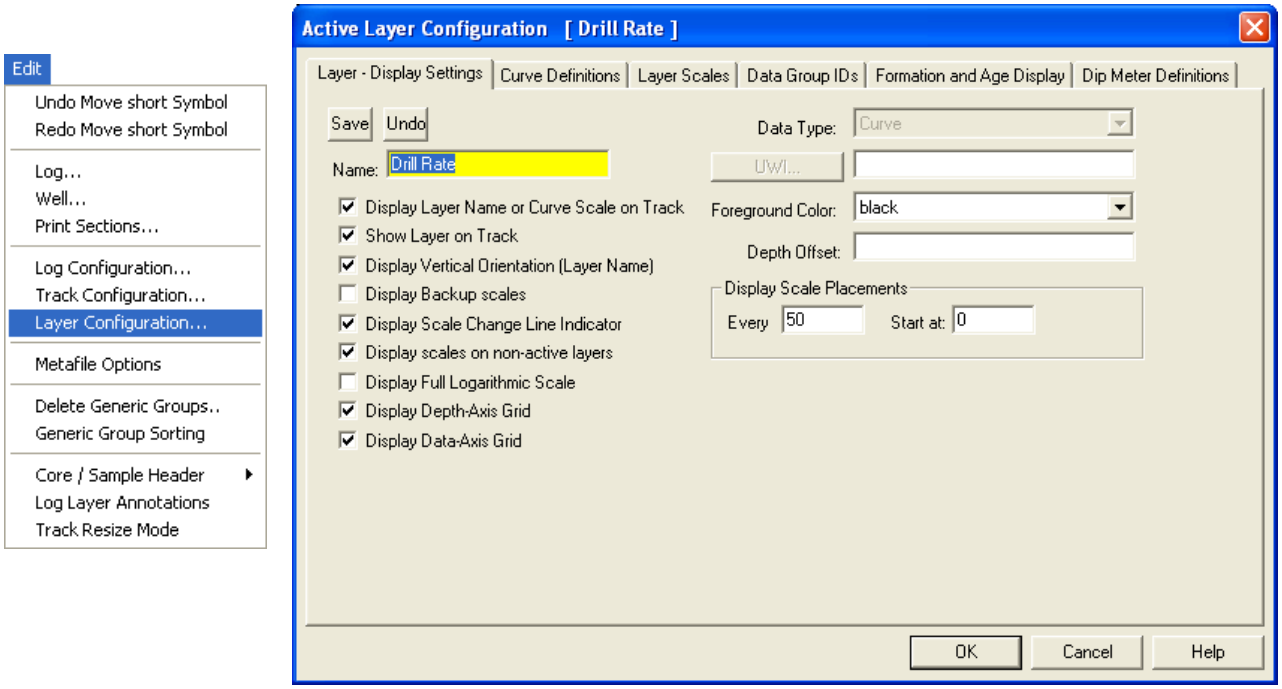
Note: The **Correlational Module** allows you to access all of the **UWI's** or wells in the database in order to display their information in comparison with the current **Primary Well** on the same log.

There are numerous Data Types for Layer Configurations. Each data type viewed below are shown in the data type field of each layer and it represents what type of data each layer can show. For instance a Curve layer can only show curves. The directional survey layer can only show survey data. These data types are listed below.

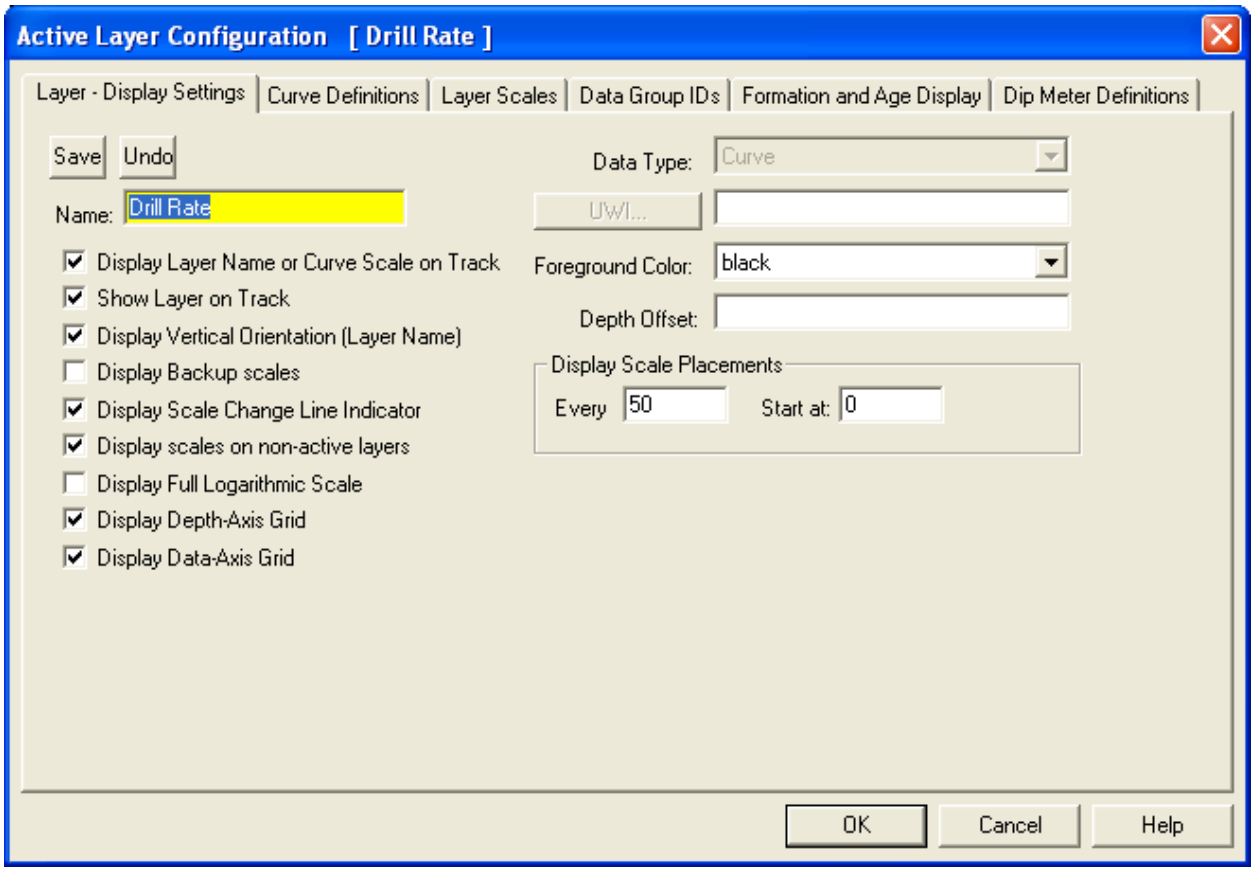
Accessories
Age (Era/Series/Stage)
Annotation (Track)
Annotation (Log)
Bedding Contacts
Bioturbation
Bit Record
Carbonate Texture
Carbonate Texture Matrix
Casing Data
Change Energy / Sea Level
Core
Core Box Data
Core Bulk Density
Core Grain Density
Core Permeability Kmax
Core Permeability K90
Core Permeability KV
Core Permeability K Air
Core Porosity Calculated
Core Porosity Helium
Core Porosity Measured
Core Sample Code
Curves
Curve Fills
Date / Drilling Schedule
Depth
Detailed Lithology
Diagenesis
Dip Meter Data
Directional Survey
Formation (Group / Formation / Member)
Formation (Short Name)
Formation (Long Name)
Fractures
Framework
Generic Category
Generic Symbol
Grain Size
Grain Size Matrix
Graphics
Hole Dip Meter Data
Interpretive Lithology
% Lithology
Lithology Descriptions
MDT Data
Multi Array Curve layer
Oil Show
Oil Staining
Percent
Porosity Grade
Porosity Type
Rounding
Core Saturated Bulk Mass – Fluids
Core Saturated Bulk Mass – Oil
Core Saturated Bulk Mass – Water
Core Saturated Bulk Mass – Solids
Core Saturated Bulk Mass – Totals
Core Saturated Grain Mass – Oil
Core Saturated Grain Mass – Water
Core Saturated Pore Volume – Oil
Core Saturated Pore Volume – Water
Core Saturated Pore Volume (Frc)- Oil
Core Saturated Pore Volume (Frc)- Water
Sedimentary Structures
Sidewall Cores
Slide / Rotate
Snieder's Rock Type Geology
Snieder's Rock Type Core
Sorting
Surveys
Tests
Trace Fossils

Shortcut:

This is an example of our Tab Dialogue Configuration window for a Curve Data Type Layer:



Revised General Display Tab



We have added an additional Display Scale Change Line Indicator **check box to handle Curve Scale changes. This display check box along with the right click pop out menu additions to handle the scale change line indicator color and thickness will give the user some additional controls. We will also draw the curve to and from the line indicator.**

The Name: Drill Rate field in yellow is a mandatory field. This is the name that is displayed for a layer or a curve irregardless of the Curve you have identified to show on this layer within the Curve Definition Tab of this dialogue window.

Display Layer Name or Curve Scale on Track If this box is checked (default), indicates that the Curve Scale or Layer heading will be displayed in the track header.

Show Layer on Track - If this box is checked (default), indicates that the layer is being displayed.

Display Vertical Orientation (Layer Name) If this box is checked indicates that the Layer heading will be displayed vertically in the track header. If unchecked it will be displayed horizontally.

Display Backup scales If this box is checked (default), any time a curve goes off scale or wraps the curve is hatched and the backup scale is viewed on the Layer.

Display Scale Change Line Indicator If this box is checked (default), any time the user changes scale a line will run across the layer (color and size to be found in the right click curve menu only) indicating a scale change.

Display scales on non-active layers If this box is checked (default), it will display the scales (including scale changes) for a curve on the log will be shown regardless of which layer is active at the time.

Display Full Logarithmic Scale If this check box is activated it will display all the major cycles will be labeled. If this is unchecked or deactivated only the two end borders of the scale will be activated.

Display Depth-Axis Grid If this box is checked (default), it will display the **Depth Axis Grid** (**X-axis**), Horizontal grid lines in Power*Log and Vertical grid lines in Power*Curve as defined in the **Log Configuration Layer Scale Tab Dialogue window**.

Display Data-Axis Grid If this box is checked (default) it will display the **Data Axis Grid** (**Y-axis**) Vertical grid lines in Power*Log and Horizontal grid lines in Power*Curve, as defined in the **Log Configuration Layer Scale Tab Dialogue window Data Axis Grid Style**.

UWI... **UWI Button**

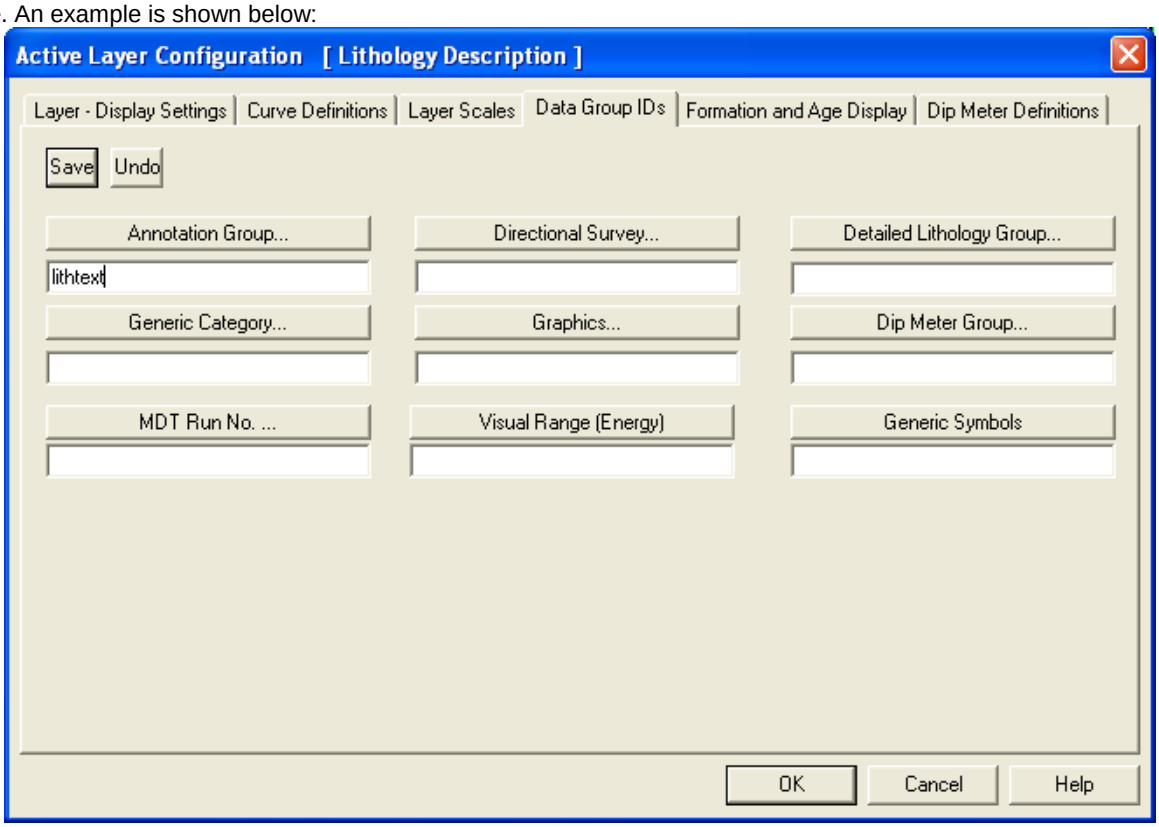
Normally, the **UWI** field within the **Layer Configuration** window should be blank, because the layer normally exhibits data from the **Active or Primary Well** on the current log. This Button or field (if you have the Correlational Module) will allow you to exhibit another wells data.

Note: If you decide to use this log as a template for creating future logs and refrain from clearing the **UWI** field(s) in the **Layer Configuration** window(s), then all future logs created from this template will contain layers pointing to another **UWI**.

If you possess the **Correlational Module**, you can use the UWI... **button** to access data from other **UWIs** or wells within the database.

Revised Data Group ID's Tab

This tab in the layer configuration window allows the user to change the specific data groups available for each Layer type. An example is shown below:



We have added the Ability to Display Multiple Visual Range and Generic Symbol groups on a log.

Once a field in this Layer Configuration Tab dialogue window has been changed the user must then **click** on the Save **button or press ALT-S**.

Annotation Group Button

The Annotation Group... **button** allows you to associate an existing Annotation Group with the Annotation layer active within the **Layer Configuration** window at the time. Each **Annotation Group** has a unique **Group ID** as they are assigned when a new log is created for a well. So for every annotation layer that is associated with a well there is a new Annotation group created. Accordingly, if you have multiple **Annotation** layers associated with a single well, then you will have to assign a unique **Group ID** number to each of the **Annotation** layers within each of their respective **Layer Configuration** windows.
For example: "***Comments***" is an Annotation layer, that when a well/log was first created was assigned an Annotation Group ID of **Comments1** with its own **Layer Configuration** window. Meanwhile, "***Remarks***" is another Annotation layer in that same well/log creation, that has been assigned Annotation Group ID **Remarks1** within its own **Layer Configuration** window. If another log is created for the same well that has both a Remarks and Comments Layers they each will be assigned Group ID's of **Remarks2** and **Comments2**. The new log will not show the same comments as the original log. You can show any group of annotations on any annotation layer and this is shown below.

Generic Category Button

You can use the Generic Category... **Generic Category button** only when the Data Type field displays, "Generic Category.". The user can use this button to associate a Generic Category Group and its associated data with a layer. Generic Category Groups are listed by their Name.

MDT Run Number Button

You can use the MDT Run No. ... **MDT Run Number button** only when the Data Type field displays, "MDT."
The user can use this button to associate a MDT Run Group Numbers and its associated data with a layer. A layer can be associated with only one MDT Run Number Group and its associated data. MDT's are listed by their Run Number and can be selected by utilizing the drop box and selecting the according number from the List. Then **click** on the OK button.

Directional Survey Button

You can use the Directional Survey... **Directional Survey button** only when the Data Type field displays, "Directional Survey." The user can use this button to associate a Directional Survey Group and its associated points with a layer Directional Survey Groups are listed by their Start Date and their Survey Group ID. The default for any Directional Survey Layer is for it to display the Survey Group ID 1and its associated points.

Graphics Button

The Graphics... **Graphics Groups button** is used, when a **Graphics** layer is the currently active layer within the **Layer Configuration** window. The **Graphics Group** button allows you to associate an existing **Graphics Group** to the currently active layer. Graphic Groups are listed by their Group Number / Name and can be selected by utilizing the drop box and selecting the according number from the List. Then **click** on the OK button.

Detailed Lithology Group Button

The Detailed Lithology Group... **Detailed Lithology Group button** is used, when a **Detailed Lithology** layer is the currently active layer within the **Layer Configuration** window. The **Detailed Lithology Group** button allows you to associate an existing **Detailed Lithology Group** to the currently active layer.

Each **Detailed Lithology Layer** added when creating new logs for a well or adding a Detailed Lithology layer/track to a log is assigned a unique **Detailed Lithology Group ID**. So for every Detailed Lithology layer that is associated with a well there is a new Detailed Lithology group created. Accordingly, if you have multiple **Detailed Lithology** layers associated with a single well, then the system will have to assign a unique **Group ID** number to each of the **Detailed Lithology** layers within each of their respective **Layer Configuration** windows.
For example: The First Detailed Lithology layer added to a well/log is assigned a Detailed Lithology Group ID of **Detlith1** with its own **Layer Configuration** window. Meanwhile, if another Detailed Lithology layer is added in a new log creation that will be assigned another Detailed Lithology Group ID **Detlith2.** Etc. Etc. Etc.

Dip Meter Group Button

The

Dip Meter Group button is used, when a Dip Meter layer is the currently active layer within the **Layer Configuration** window. The **Dip Meter Group** button allows you to associate an existing **Dip Meter Group** to the currently active layer. Dip Meter Groups are listed by their Group Name and can be selected by utilizing the drop box and selecting the according name from the List. Then **click** on the

button.

New Visual Range Button

The

Visual Range Group button is used, when a Visual Range layer is the currently active layer within the **Layer Configuration** window. The **Visual range Group** button allows you to associate an existing **Visual range Group** to the currently active layer. Dip **Visual range** are listed by their Group Name and can be selected by utilizing the drop box and selecting the according name from the List. Then **click** on the

button.

New Generic Symbols Button

The

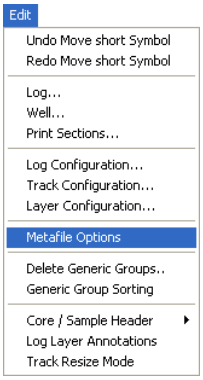
Generic Symbols Group button is used, when a Generic Symbol layer is the currently active layer within the **Layer Configuration** window. The **Generic Symbols Group** button allows you to associate an existing **Generic Symbols Group** to the currently active layer. The **Generic Symbols Group** are listed by their Group Name and can be selected by utilizing the drop box and selecting the according name from the List. Then **click** on the

button.

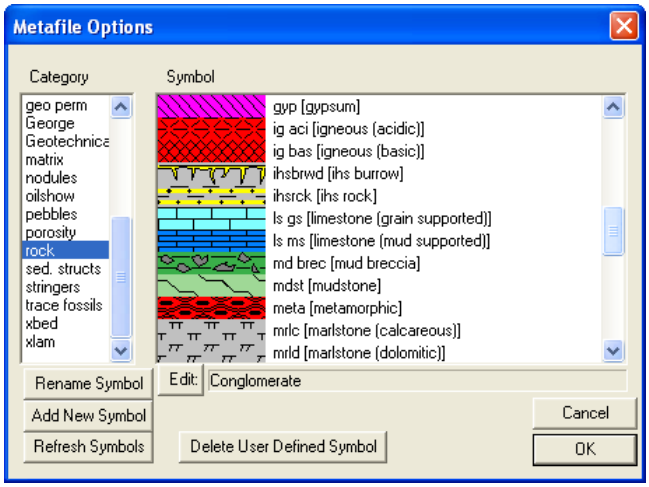
Revised - Metafile Options

This option allows the users to edit any existing metafiles or symbols within the PowerSuite applications (i.e. rock types, accessories, structures etc.) or add new Metafiles or symbols to our lists for the more sophisticated users.
We have given the user the ability to rename either the short or long names for the User Defined symbols they have created.

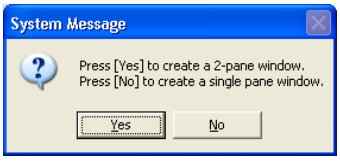
How to Edit an Existing Metafile



1. **Click** on the **Metafile Options** selection located under the **Edit pull down menu**. This will activate the Metafile Options window.



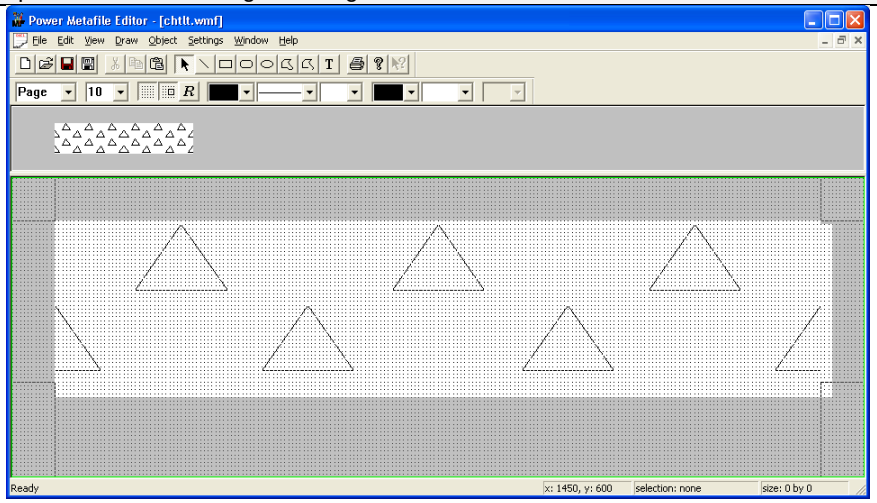
2. **Click** on the **category** of the symbol you wish to modify or edit. This will activate a list of existing symbols shown on the right hand side of the window.
3. **Click** on the **Symbol** you wish to edit. It will become highlighted and fill in the edit field.
4. **Click** on the Edit: **button**. This will activate a System Message window shown below.



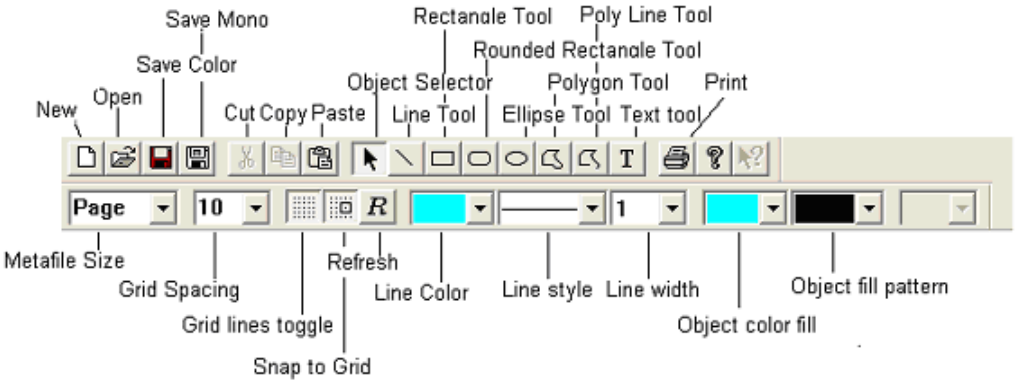
Note: A (two) **2- pane window** shows the metafile in regular and expanded views. A **single pane** window shows the metafile in an expanded view only.

5. **Click** on either the Yes **or** No **button** and the Power Metafile Editor will open with the selected symbol in the window that you had selected.

Note: The Rock Type window shown below is a two pane window and is different from any other Metafile window. The upper pane shows the actual screen or print size. The difference with the rock type window is that the upper pane shows the metafiles repeatability. The upper pane is placing the same metafile staked on top of each other and left to right attempting to show the user the metafiles repeatability. This is essential when creating or editing rock types because they should be repeatable so when printed they will appear seamless when drawn on the screen or printouts when the region is larger than the metafile.



The toolbar functionality's are defined in the illustration shown below.



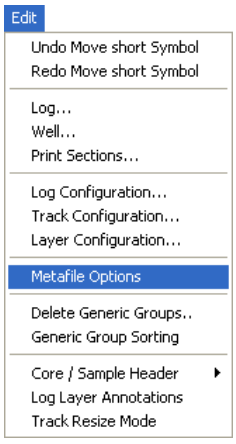
Note: Lines on sedimentary structures / trace fossils will change color if line width is 1.

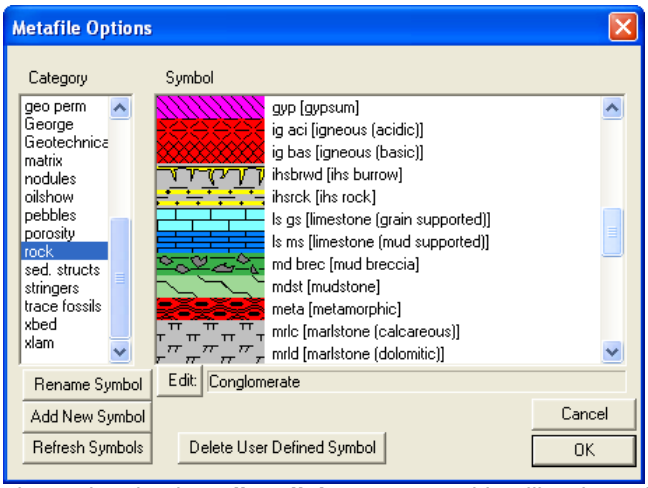
6. The lower or expanded portion of the window is the editable portion. With the mouse you can select a line, rectangle, polyline or other shape tool and draw in this window. You can move the lines or shapes by dragging the shapes, copy or delete by using the toolbar or keyboard keys or buttons. Use the drop down menus or the toolbars to select the different options the user can utilize.
7. Once the metafile has been modified to your specifications the user must **click** on the **Save button** on the toolbar or **click** on the **File** pull down menu and select **Save**.

Note: There are two save choices. The Save Mono is done automatically for you when you save the metafile. In other words the color metafiles are converted to black and white metafiles and saved to the Powersuite/symbolm folder. These mono metafiles come in useful when printing to a black and white printer. The color symbols are saved to Powersuite/symbol folder.

8. Exit the Power Metafile Editor by **clicking on the X** in the upper right hand corner of the window or **click** on the **Exit selection** located under the **File pull down menu**. This will put the user back into the PowerSuite Application Metafile options window.
9. Repeat steps 2-8 to edit more existing metafiles.
10. **Click** on the **button** in the Metafile Options window to exit this window. All the changes will be reflected in the Choice lists, printed legends and on the screen and printed metafiles.

How to Add a New Metafile

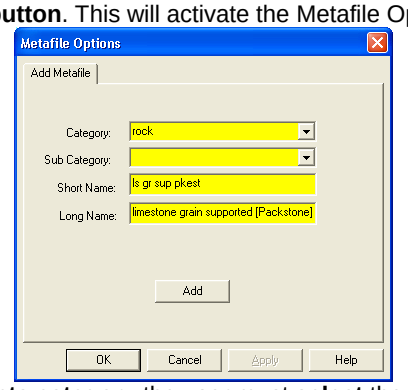




1. **Click** on the **Metafile Options** selection located under the **Edit pull down menu**. This will activate the Metafile Options window shown below.
2. **Click** on the **category** of the symbol you wish to add a new symbol to. This will activate a list of existing symbols shown on the right hand side of the window.

3. **Click** on the

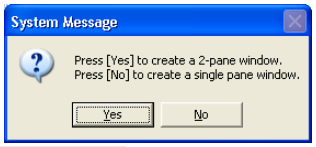
button. This will activate the Metafile Options (Add Metafile) window.

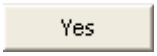


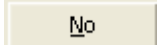
4. If you have selected the **components category** the user must **select** the appropriate accessory, fossil, grain or texture **Sub Category** drop box.
5. Type in a **short name** and a **long name** into their respective fields for your new metafile. These will appear in the choice lists and will be exported in the ASCII Lithology export file.
6. **Click** on the

button. This will activate a System Message window if you have selected any other category other than rock.

Note: A (two) **2-pane window** shows the metafile in regular and expanded views. A **single pane** window shows the metafile in an expanded view only.

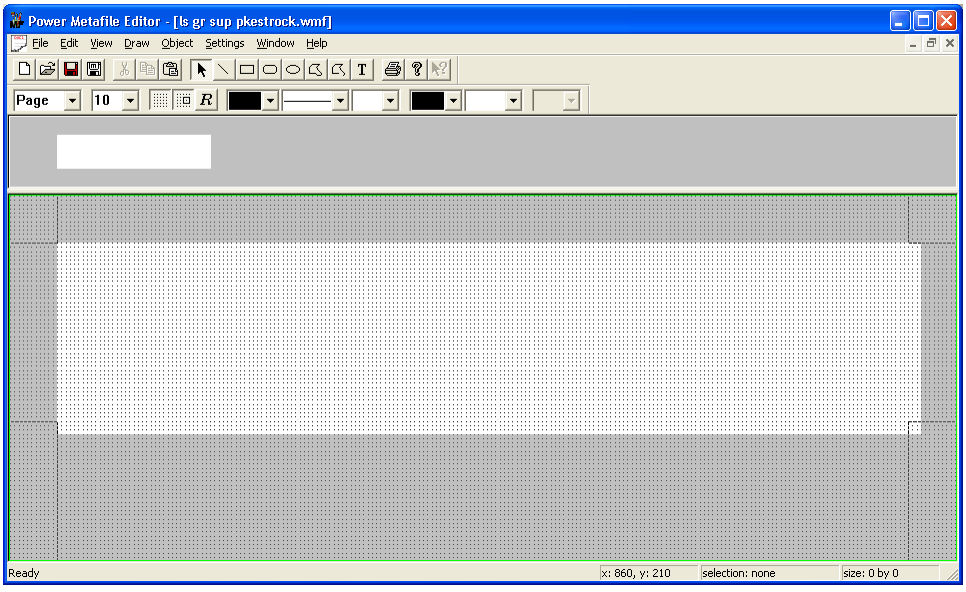


7. **Click** on either the 

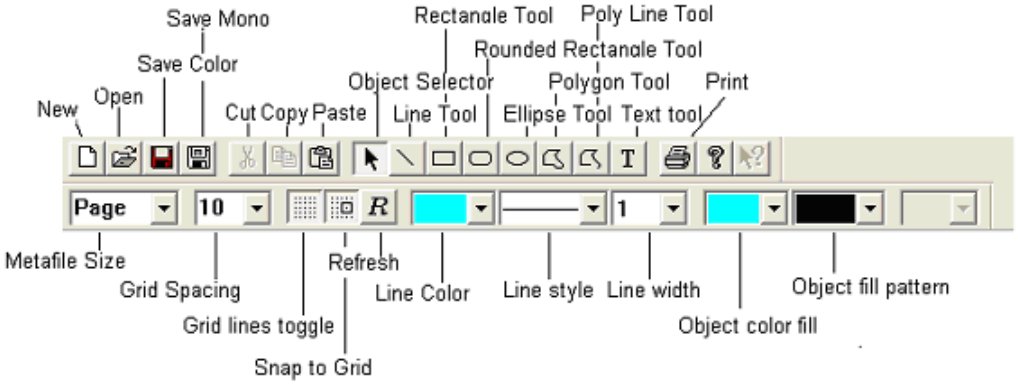
or 

button and the Metafile editor will open a blank Power Metafile Editor window with a file name that is a combined short name and category name.

Note: The Rock Type window shown below is different to any other Metafile window. The upper pane shows the actual screen or print size The difference with the rock type window is that the upper pane shows the metafiles repeatability. The upper pane is placing the same metafile staked on top of each other and left to right attempting to show the user the metafiles repeatability. This is essential when creating or editing rock types because they should be repeatable so when printed they will appear seamless when drawn on the screen or printouts when the region is larger than the metafile.

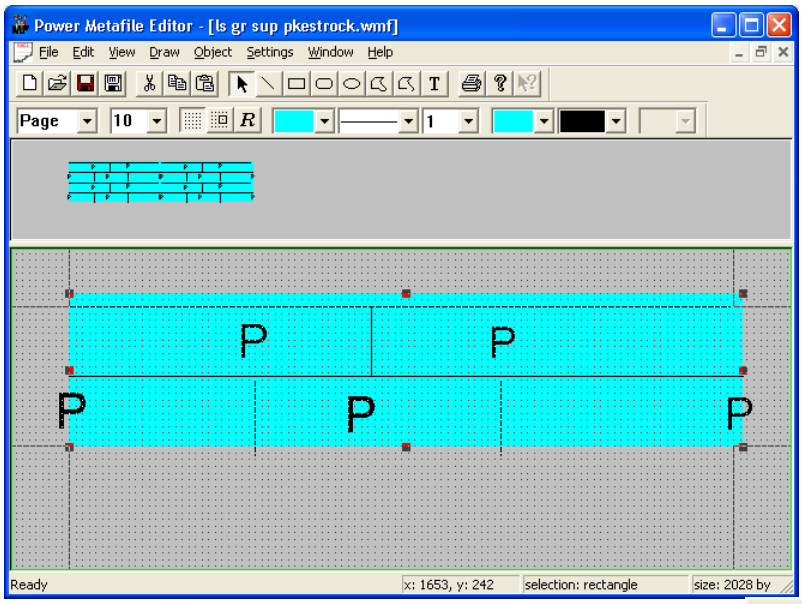


The toolbar functionality's are defined in the illustration shown below.



8. The lower or expanded portion of the window is the editable portion. With the mouse you can select a line, rectangle, polyline or other shape tool and draw in this window. You can move the lines or shapes by dragging the shapes, copy or delete by using the toolbar or keyboard keys or buttons. Use the drop down menus or the toolbars to select the different options the user can utilize.

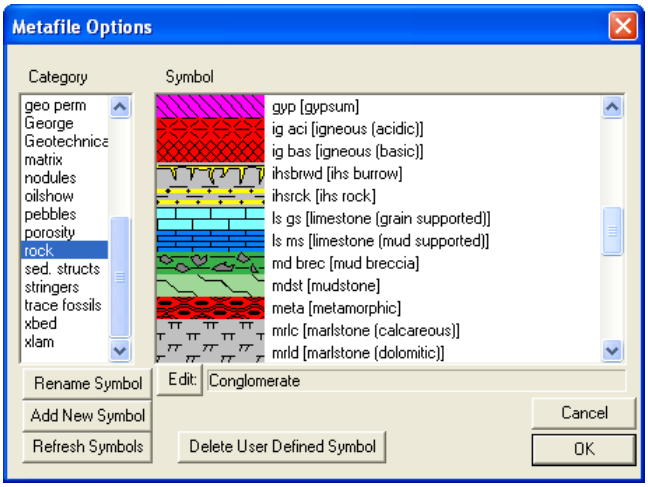
Note: The Polyline and Polygon drawing tools require a double **click** to finish the action. The text tool font size is determined by the height of the field. Once an action is performed the default reaction is to place the emphasis back on the select tool.



9. Once the metafile has been designed to your specifications the user must **click** on the Save **button** on the toolbar or **click** on the file pull down menu and select **Save**.

Note: There are two save choices. The Save Mono is done automatically for you when you save the metafile. In other words the color metafiles are converted to black and white metafiles and saved to the Powersuite/symbolm folder. These mono metafiles come in useful when printing to a black and white printer. The color symbols are saved to Powersuite/symbol folder.

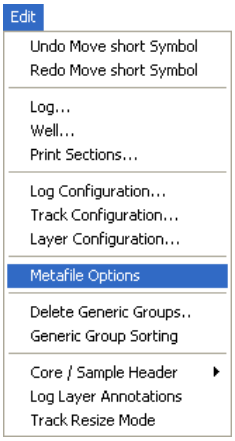
10. Exit the Power Metafile Editor by **clicking on the X** in the upper right hand corner of the window or **click** on the **Exit selection** located under the **File pull down menu**. This will put the user back into the PowerSuite Application Metafile options window. You will now view you new creation in the appropriate list.

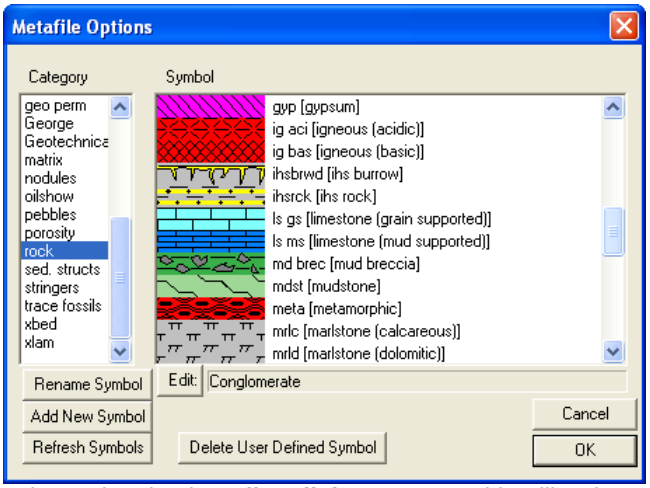


11. Repeat steps 2-10 to add more metafiles.
12. **Click** on the OK **button** in the Metafile Options window to exit this window. All the changes will be reflected in the Choice lists, printed dynamic legends and will be available to draw with on your existing, new or old logs.

How to Delete an Added or User defined Metafile

We will not allow the user to delete a system metafile. You are able to modify or edit a system metafile but the deletions of these symbols are not allowed.



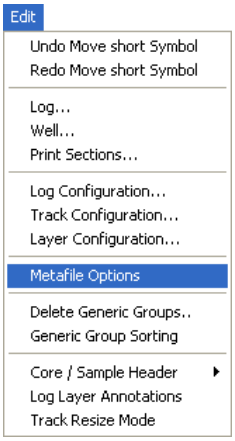


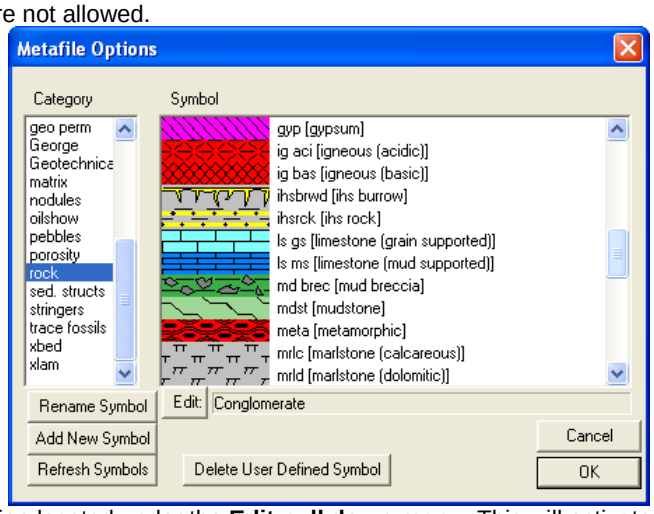
1. **Click** on the **Metafile Options** selection located under the **Edit pull down menu**. This will activate the Metafile Options window shown below.
2. **Click** on the **category** of the symbol you wish to delete. This will activate a list of existing symbols shown on the right hand side of the window.
3. **Click** on the user defined **Symbol** you wish to delete and it will become highlighted and fill in the edit field.
4. **Click** on the Delete User Defined Symbol **button**. This will activate a System Message window.

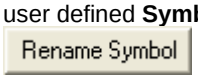
5. **Click** on either the Yes **button** and the Metafile will be deleted.
6. **Repeat steps 2-5** to delete more users defined existing metafiles.
7. **Click** on the OK **button** in the Metafile Options window to exit this window. All the changes will be reflected in the Choice lists, printed legends and on the screen and printed metafiles.

New - How to Edit an Existing Name for a User defined Metafile

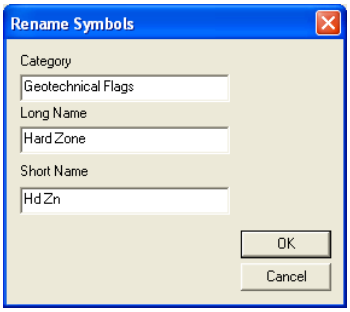
We will not allow the user to rename a system metafile. You are able to modify or edit a system metafile but the renaming or deletions of these symbols are not allowed.





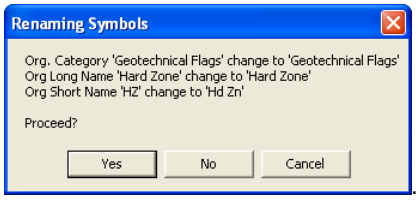
1. **Click** on the **Metafile Options** selection located under the **Edit pull down menu**. This will activate the Metafile Options window shown below.
2. **Click** on the **category** of the symbol you wish to rename. This will activate a list of existing symbols shown on the right hand side of the window.
3. **Click** on the user defined **Symbol** you wish to rename and it will become highlighted and fill in the edit field.
4. **Click** on the 

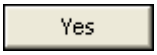
button. This will activate the Rename Symbol window.



5. **Click** on either the

button and the Metafile rename confirmation window will appear



6. **Click** on the 

button to rename the symbol. This action will put you back into the Metafile Options window.

New - Core / Sample Header

The **Core / Sample Header** window allows you to edit the information being displayed when the core or Borehole log header is printed. It also allows you to delete the core log header.

Core Log

Well Name: Anybody Oil Sands	Location: Athabaska	Ground / Collar: 321.05 (m)
UWI: Anybody Oil Sands	KB: 328.45 (m)	UTM East: 213.45
Hole ID: Hole Number 45	Core Quality: Good	UTM North: 123.12
Cored Interval: 34 (m) to 120.45 (m)	Logged by: R.W. (Bob) Sephton P.Geol.	Slabbed: Yes
	Date: Feb 1, 2008	

Depth Correction: Good

Remark:
No problems or concerns.
This is the remarks portion of the Core Log header.
It can have as many line of data as you can concieve.
Your imagination is the limation to these remarks.
Core Log Scale 1:96

Core Log Header

Core Log

Well Name: Anybody Oil Sands	Location: Athabaska	Ground / Collar: 321.05 (m)
UWI: Anybody Oil Sands	KB: 328.45 (m)	UTM East: 213.45
Hole ID: Hole Number 45	Core Quality: Good	UTM North: 123.12
Csg Depth (MD): 122.45 (m)	Logged by: R.W. (Bob) Sephton P.Geol.	Slabbed: Yes
Core Point (MD): 34 (m)	Date: Feb 1, 2008	Lab.: Agat Labs
Total Depth (MD): 120.45 (m)	Lic.#: NA	% Calc. Recovery: 89
Rig#: Encore	Lease#: 23145	% Total Recovery: 96

Depth Correction: Good

Remark:
No problems or concerns.
This is the remarks portion of the Core Log header.
It can have as many line of data as you can concieve.
Your imagination is the limation to these remarks.
Core Log Scale 1:96

Alternate Core Log Header

Bore Hole Log

Well Name: Anybody Oil Sands	Location: Athabaska	Ground / Collar: 321.05 (m)
UWI: Anybody Oil Sands	KB: 328.45 (m)	UTM East: 213.45
Hole ID: Hole Number 45	Sample Quality: Good	UTM North: 123.12
Logged Interval: 34 (m) to 120.45 (m)	Logged by: R.W. (Bob) Sephton P.Geol.	
	Date: Feb 1, 2008	

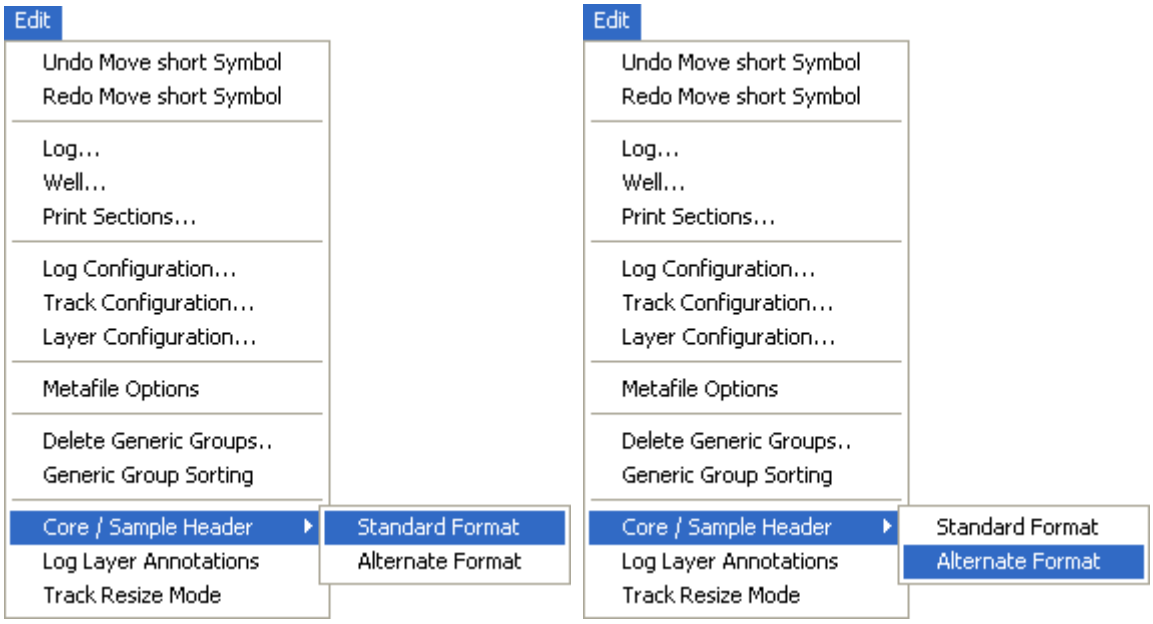
Depth Correction: Good

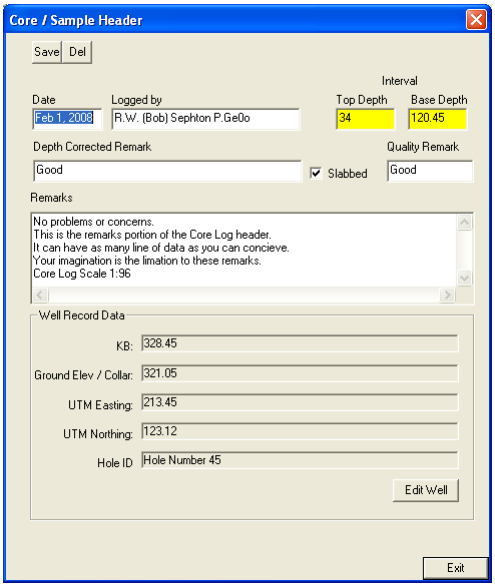
Remark:
No problems or concerns.
This is the remarks portion of the Core Log header.
It can have as many line of data as you can concieve.
Your imagination is the limation to these remarks.
Core Log Scale 1:96

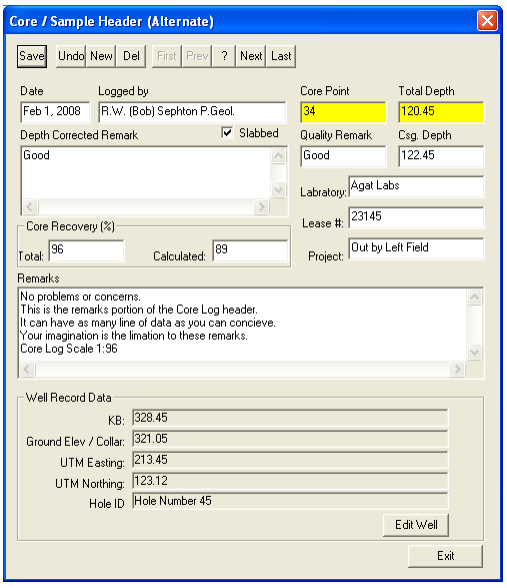
Sample / Borehole Log header

How to Edit a Core / Sample Header

1. **Click** on the **Core / Sample Header** selection located under the **Edit pull down menu** and then either Select Standard Format or Alternate Format.





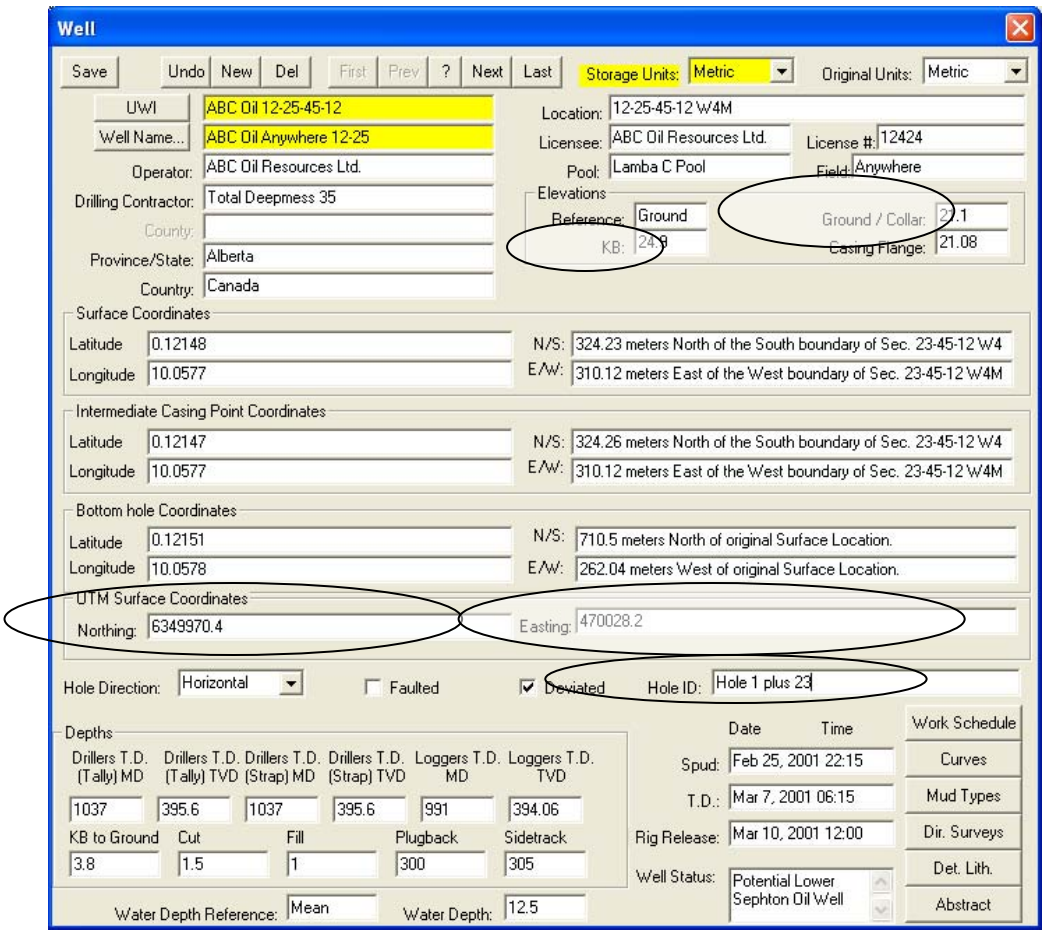


2. In the **Logged by** field, type in the name of the person who the core is logged by.
3. In the **Top Depth** and **Base Depth** fields, type in the Top Depth and Base Depth of the core / sample interval.
4. In the **Depth Corrected Remark** field, type in the remark related to depth change that you wish to appear at the core log header.
5. Activate the **Slabbed** check box ☑, if you wish the core log header to be cut in half. This is not applicable to the Sample Log abbreviated Header.
6. In the **Quality Remark** field, type in the remark related to quality that you wish to appear at the core log header.
7. In the **Remarks** field, type in any other remarks that you wish to appear on the Core Log header.

N.B. The Remarks field is limitless as the Core Header Expands to the appropriate size to accommodate the entire Remarks Field.

Well Record Data portion of the Core / Sample Header window

1. **Click** on the Edit Well **button** to enter KB and Ground Elevation. The **Well** window will be shown.



2. In the **KB** field, enter the KB. In the **Ground / Collar,** enter the ground elevation as well as the UTM coordinates and the Hole ID if you have them.
3. **Click** on the Save **button** or press ALT-S. This will activate the **Core Header** window showing the KB and Ground Elevation that you have just entered.
4. **Click** on the Exit **button**. If the record has been successfully saved, **click** on the appropriate button when prompted with the **Shortcut Options** system window.

How to Delete a Core / Sample Header

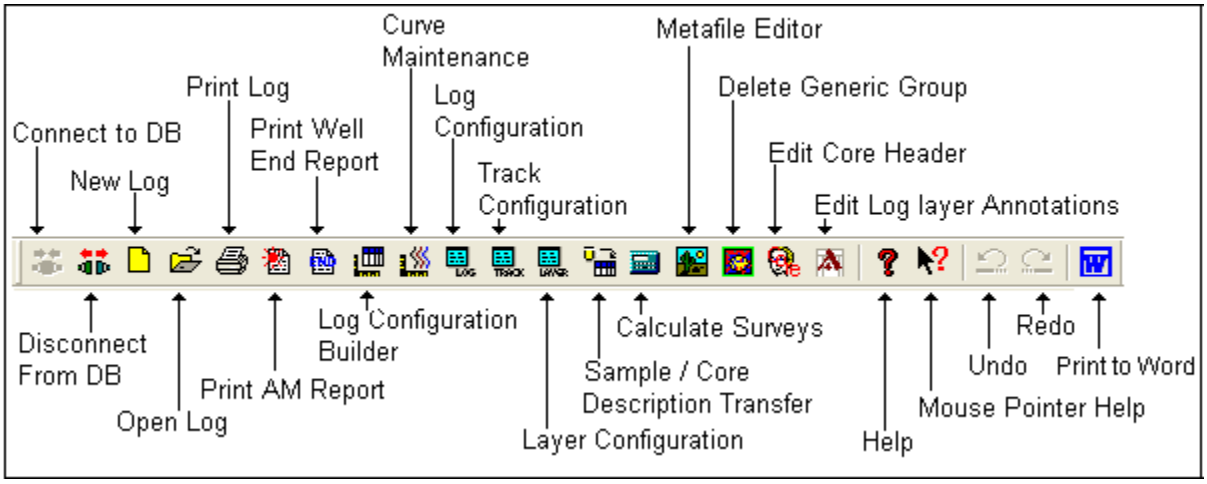
1. **Click** on the **Core / Sample Header** selection located under the **Edit pull down menu**. This will activate the **Core / Sample Header** and select the Alternate or standard selections window.
2. **Click** on the Del **button**, and the **Confirmation** window will be shown.
3. **Click** on the Yes **button**, and the **Core Header** will be deleted.

Field Restriction Table:

Date	DATE FORMAT	Default=Current Date	Optional
Logged By	50	Character	Optional
Core Interval Top Depth	5.5	Numeric	Mandatory
Core Interval Bottom Depth	5.5	Numeric	Mandatory
Depth Corrected Remark	20	Character	Optional
Quality Remark	20	Character	Optional
Remark	40,000	Character	Optional

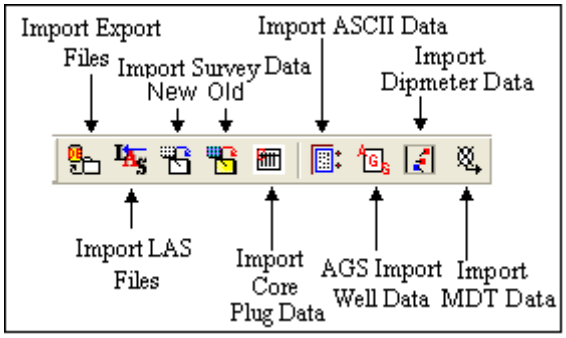
Revised - View Menu – Toolbar Selection

Turns the Toolbar on and off. This toolbar is dock able and can be moved to different places on the screen.
The Power*Log / Core & Curve™ Toolbar… We have added a Print to Word Icon



Revised - View Menu - Import Toolbar Selection

Turns the Import Toolbar on and off. This toolbar is dock able and can be moved to different places on the screen.
The Power*Log / Core & Curve™ Import Toolbar… We have added a Import Surveys Old method Icon



Revised Well Formation Window

New - Addition to Bit Record Layer functionality

Moving Bit Records (Drag and Drop In / Out Info) on the Layer.

1. Make the **Bit Record** layer active within the **Drilling Progress** track by clicking on the track and then selecting the **Bit Record** layer from the **Layer Selection List** field.
2. **Double click** on the **Layer** to activate the Bit Record Data entry window.
3. **Depress and Hold** the **CTRL key** (on the keypad) and **click** on the Bit record **In or Out information** and drag your mouse to a new location on the layer. You will see the outline of the data moving with your mouse pointer. **Let your mouse pointer go** and the information will be placed at that new location. **Release the Ctrl key.**
4. **Repeat Step** 3 to move more Bit Record In / Out Information on a layer.

New - Addition to Casing Layer functionality

Moving the Casing (Drag and Drop Data) on the Layer.

1. Make the **Casing** layer active within the track by clicking on the track and then selecting the **Casing** layer from the **Layer Selection List** field.
2. **Double click** on the **Layer** to activate the Bit Record Data entry window.

3. **Depress and Hold** the **CTRL key** (on the keypad) and **click** on the **Casing information** and drag your mouse to a new location on the layer. You will see the outline of the data moving with your mouse pointer. **Let your mouse pointer go** and the information will be placed at that new location. **Release the Ctrl key.**
4. **Repeat Step** 3 to move more Casing Information on a layer.

New - Addition to Directional Survey Layer functionality

Aligning All the Directional Survey Points

1. Make the **Directional Survey** layer active within the track by clicking on the track and then selecting the Directional Survey layer from the **Layer Selection List** field.
2. **Right click** anywhere within the **Directional Survey** layer to activate the pop-up menu.

3. **Click** on **Align Left (All), Align Right (All)** or **Center (All)** to align all the **Directional Survey Points** accordingly.

Moving the Directional Survey data (Drag and Drop Data) on the Layer.

1. Make the **Directional Survey** layer active within the track by clicking on the track and then selecting the **Casing** layer from the **Layer Selection List** field.
2. **Double click** on the **Layer** to activate the Directional Survey Points Data entry window.
3. **Depress and Hold** the **CTRL key** (on the keypad) and **click** on the **Directional Survey information** and drag your mouse to a new location on the layer. You will see the outline of the data moving with your mouse pointer. **Let your mouse pointer go** and the information will be placed at that new location. **Release the Ctrl key.**
4. **Repeat Step** 3 to move more Directional Survey Information on a layer.

New - Addition to Formation Top Layer functionality

Aligning All the Formation Tops

1. Make the Formation Tops layer active within the track by clicking on the track and then selecting the Formation Tops layer from the **Layer Selection List** field.
2. **Right click** anywhere within the **Formation Tops** layer to activate the pop-up menu.

3. **Click** on **Align Left (All), Align Right (All)** or **Center (All)** to align all the Formation Tops accordingly.

Moving the Formation Top Data (Drag and Drop) on the Layer.

1. Make the Formation Top layer active within the track by clicking on the track and then selecting the **Formation Top** layer from the **Layer Selection List** field.

2. **Double click** on the **Layer** to activate the Directional Survey Points Data entry window.
3. **Depress and Hold** the **CTRL key** (on the keypad) and **click** on the **Formation Top information** and drag your mouse to a new location on the layer. You will see the outline of the data moving with your mouse pointer. **Let your mouse pointer go** and the information will be placed at that new location. **Release the Ctrl key.**
4. **Repeat Step** 3 to move more Formation Top Information on a layer.

New - Addition to Graphics Layer functionality

Moving the Graphics (Drag and Drop) on the Layer.

The user has the ability to move a picture around within the confines of the layer if the **Lock Aspect Ratio** check box☑ has been activated. Otherwise the picture will take up the entire width of the track and there would be no need to move the picture.

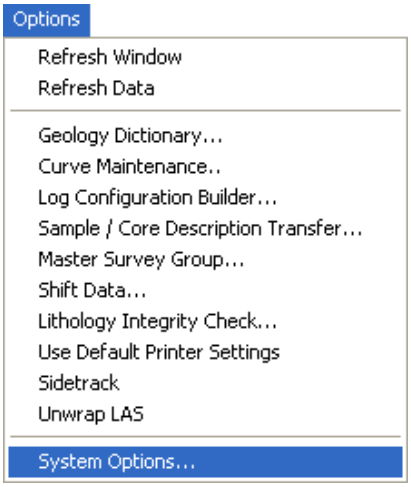
1. **Make the Graphics layer active** by **clicking on the track** that holds the graphics layer and **selecting** the **graphics layer** from the layer selection pull down menu in the selection bar.
2. **Click on the graphic and drag** left or right (Power*Log / Core) or up or down (Power*Curve) and **release the mouse button** the picture will be redrawn at the new position.

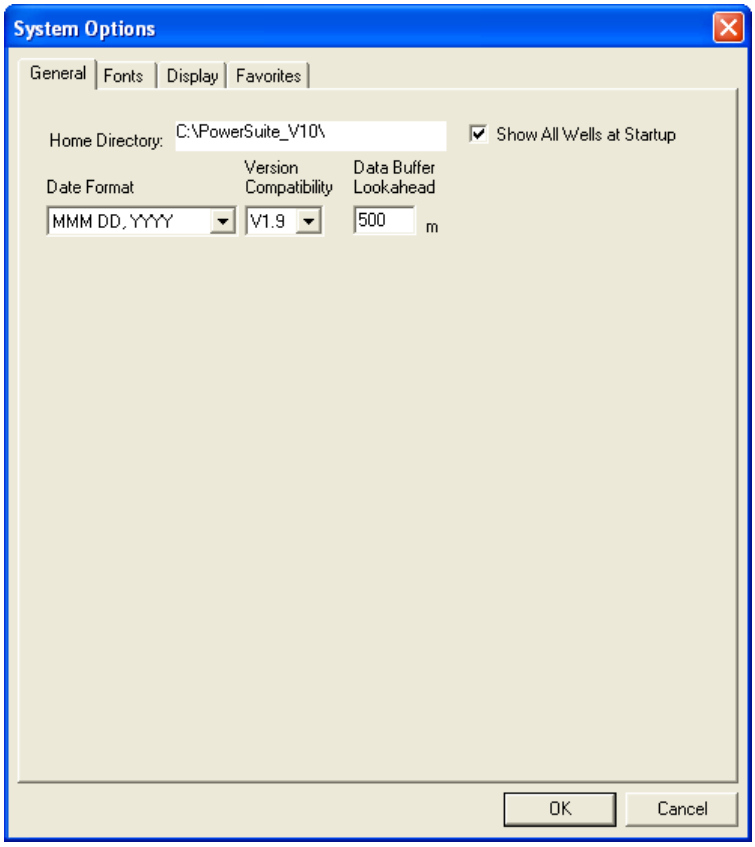
Note: The measure depth relationship of the graphic will not be adjusted in this manner. Just the position with respect to the layer/track edges can be adjusted. If you wish to change the top depth of the picture you must change it in the builder itself.

Revised System Options

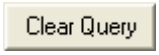
The user can manage Power*Log, Power*Core and Power*Curve system settings with this tab dialogue window. Once you have made your changes Click on the OK **button**

General Tab

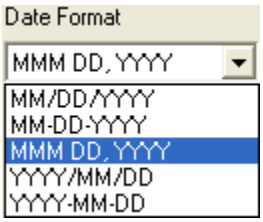




Home Directory - This is the directory on your hard drive where **Power*Log, Power*Core and Power*Curve** is being executed. The user will not see any symbols on their log or print out any of our reports it you have the wrong home directory.

This check box when activated will populate the Open Log window with all the wells in the database. If it is unchecked it may help our corporate users and the time it take to retrieve thousands of wells from the database and to populate the Open Log window with that information. If this check box is deactivated and you wish to see all your wells then simply **click** on the 

button in the Open Log window to see all their wells if this option is deactivated.



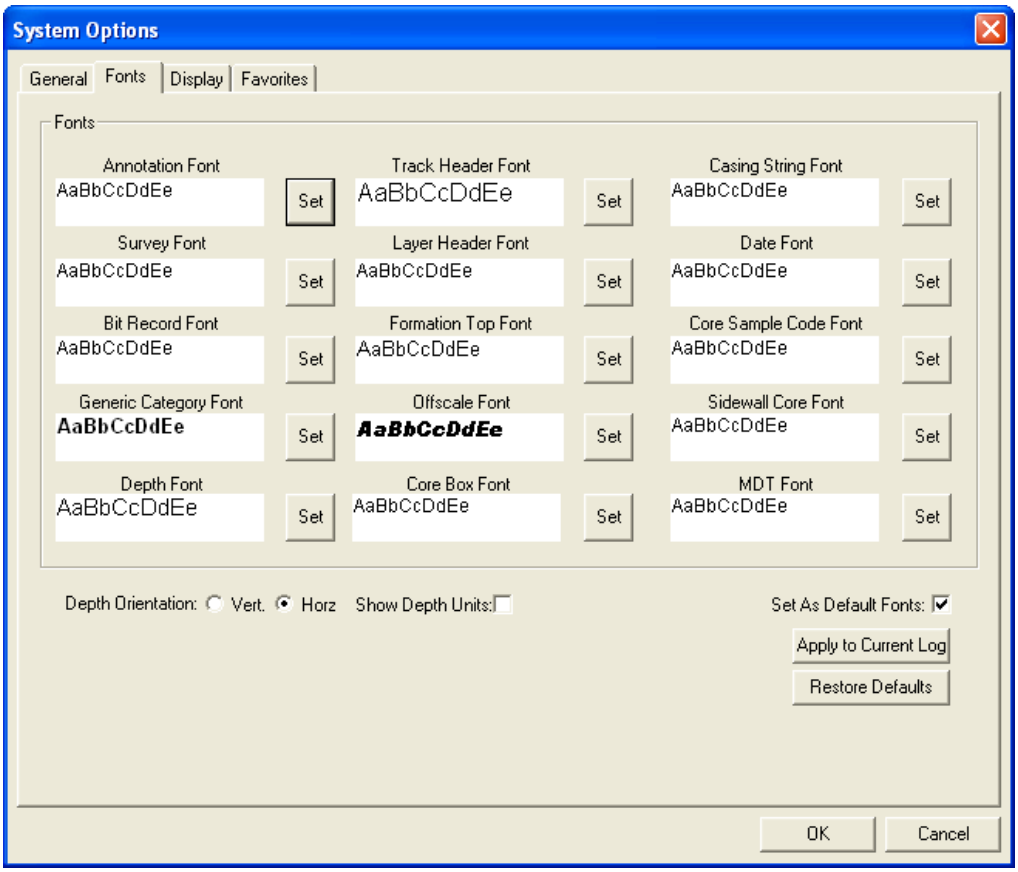
Date Format - From this drop box, you can select the date format. This selection determines how every date in **Power*Log / Core & Curve** will be entered and displayed. If you import a log with different date formats, **Power*Log / Core & Curve** will change the dates to comply with the format you've chosen here. The user can change this at any time and all the Date formats will be changed in the database.

Version Compatibility - Enables the user to achieve compatibility for Annotations in the older Versions of Power*Suite (V1.81 and before) and the Annotations in the newer Versions of Power*Suite (V1.9 and later).

Data Buffer Lookahead - The number placed in this field determines how far ahead and behind the current top depth will be stored in the computers buffer. The larger the look ahead number, the longer it takes for Power*Log / Core & Curve to refresh the screen when you exceed the look ahead value. However, until you meet or exceed the look ahead value, scrolling will be much faster, because the database is not yet being accessed.

New Fonts Tab

This tab allows the user to set up most of the fonts used in Power*Log, Core and Curve. You can set it up to be used on the current log as well as using the fonts as your defaults when you are making new logs.



Annotation Font - Allows you to determine the default font style, type, color and size of your annotations on your log, Also this is the default when you use any of the Sample Description Transfer options.

Survey Font - Allows you to determine the font style, type, color and size of your survey data associated with the Survey Layer on your log.

Bit Record Font - Allows you to determine the font style, type, color and size of your bit record data associated with the Bit Record Layer on your log.

Generic Category Font - Allows you to determine the font style, type, color and size of your Long or Short Name display option in all the Generic Category Layers displayed on your log.

Depth Font - This allows you to determine the font style, type, color and size of the depth markers in the **Depth** track of the log.

Depth Orientation: Vert. Horz - These radio buttons allows the user to change the orientation of the Depth Font on the Layer. Beware you may have to change the Track Width to accommodate the Font size and orientation. Refer to the Log Configuration Builder to do this.

Show Depth Units This check box when activated will display the depth units with the depth on the Depth Layer. ie. 1000 ft or 1000 m vs. 1000

Track Header Font - Allows you to determine the font style, type, color and size of your Track Headers on your log. All track headers use the same font across the entire log.

Layer Header Font - Allows you to determine the font style, type, color and size of your Layer Headers on your log. All Layer headers use the same font across the entire log.

Formation Tops Font - Allows you to determine the font style, type, color and size of your Formation Tops data associated with the Formation Tops Long and Expanded Layers on your log.

Offscale Font - Allows you to determine the font style, type, color and size of your curve values displayed when the curve pegs off scale.

Core Box Font - Allows you to determine the font style, type, color and size of your Core Box data entered in the Core Box layer.

Casing String Font - Allows you to determine the font style, type, color and size of your Casing string data displayed on the Casing String layer. This data is entered trhough the Casing String Report.

Date Font - Allows you to determine the font style, type, color and size of your Date data entered in the Date layer.

Core Sample Code Font - Allows you to determine the font style, type, color and size of your Core Plug data entered through the Core Plug Report. This font is displayed on the Core Sample Code layer.

Sidewall Core Font - Allows you to determine the font style, type, color and size of your Sidewall Run and Sample Number data entered through the Sidewall Core Report. This font is displayed on the Sidewall Core layer.

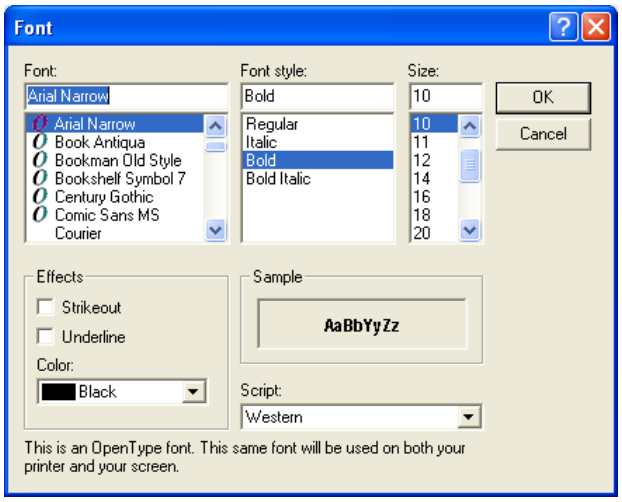
MDT Font - Allows you to determine the font style, type, color and size of your MDT Run and Test Number data entered through the MDT Report. This font is displayed on the MDT layer.

Set As Default Fonts This check box when activated will make the font setting in this window your defaults for any new log created regardless on the Fonts stored in the template.

How to Set your Fonts

1. **Click** on **System Options selection** under the **Options** menu selection To activate the System Options window.
2. Then **click** on the **Font Tab** to activate the Tab.
3. **Click** on the

button beside the **Font option** you wish to change and this will activate the Font Window.

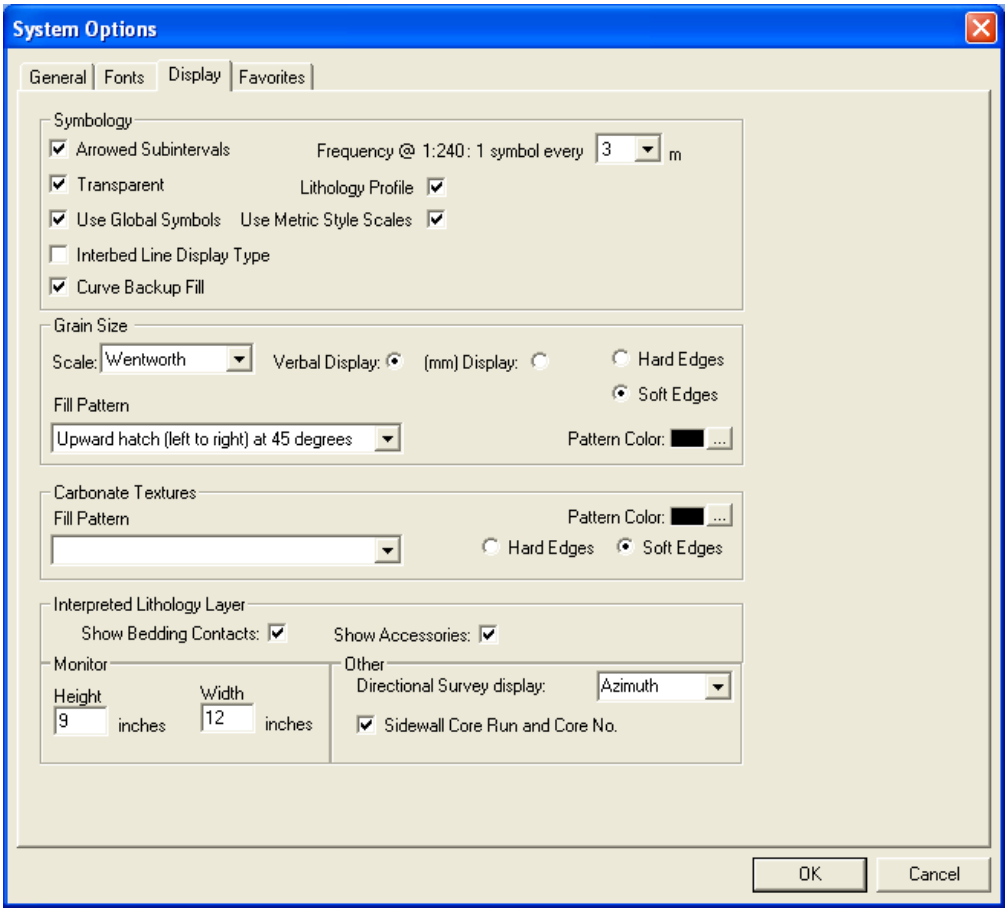


4. Select form the Font, Font Style, Size Effects and Color. When you are finished **click** on the OK **button**
5. Repeat steps 2-4 for all Font types.
6. **Click** on the Apply to Current Log **button.**
7. If you want to set these as your default Font settings **click** on the Set As Default Fonts **check box.**
8. **Click** on the OK **button** in the **Systems Options** Tab dialogue window**.**

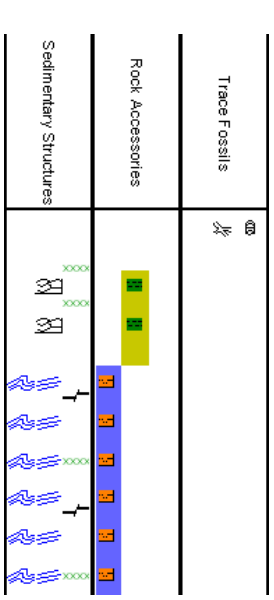
How to restore the System default Fonts

1. **Click** on **System Options selection** under the **Options** menu selection To activate the System Options window.
2. Then **click** on the **Font Tab** to activate the Tab.
3. **Click** on the Restore Defaults **button**.
4. **Click** on the Apply to Current Log **button.**
5. **Click** on the OK **button** in the **Systems Options** Tab dialogue window**.**

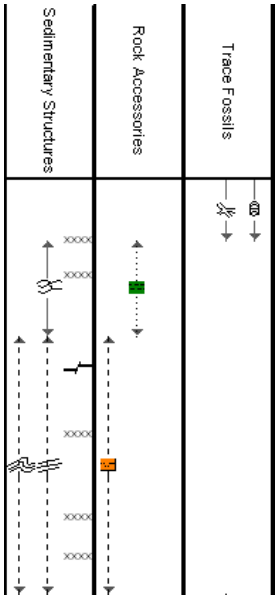
Display Tab



Arrowed Subintervals - This check box ☑ when activated will indicate the top and bottom of your subintervals (portion of an interval) with an arrow rather than a set of symbols. An example is shown below.



Normal Subintervals

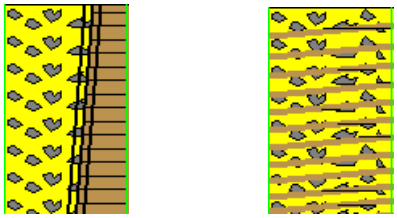


Arrowed Subintervals

Transparent - This check box when activated, this function makes the background of the accessory symbols transparent, so that the bed in the background shows through. If deactivated, a white background surrounds the accessory symbols in order to separate them more from the beds.

Use Global Symbols – With the ability to edit existing metafiles the user may have imported a well that has used metafiles or symbols that have been modified to look differently than the one existing within your system symbols. If you wish to use your symbol set instead of the revised imported ones you can select this check box to make that change.

Interbed Line Display Type - This check box when activated will display the interbed data with a line display splitting the two lithology types or when unchecked will display the lithology in an interbed fashion as displayed below.

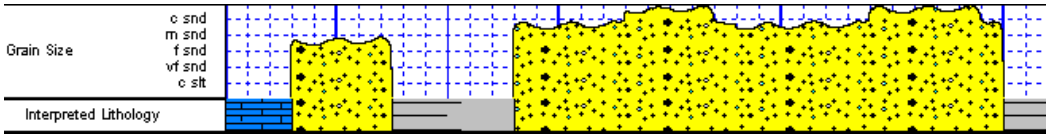


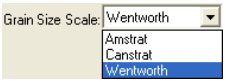
Curve Backup fill – This check box when activated will show a sideways hatching fill pattern when a curve goes off scale or in the backup mode. If unchecked there will be no hatching pattern when the curve goes off scale.

Frequency @ 1:240 – This drop box determines how often symbols are drawn on a **Lithology Layer**, with the scale of 1:240. For example: 1 symbol every 1 meter at 1:240, 2 symbols every 1 meter at 1:120, 1 symbol every 2 meters at 1:480, and so on. These frequencies are only in effect if you utilize the entire interval in **Oil Shows**, **Rounding**, **Sorting**, **Framework**, or designated an interval in **Sedimentary Structures**, **Traces Fossils** and Rock Accessories.

Lithology Profile - This check box when activated will fill in the Carbonate Texture and Grain Size layers with the interpretive lithology. It will draw the lithology to the maximum size filled in over the interval.

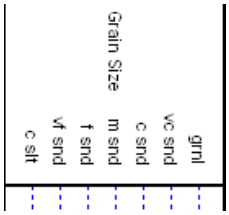
Note: The user may wish to turn off the track borders when this option is selected. You will see an example of this shown below.



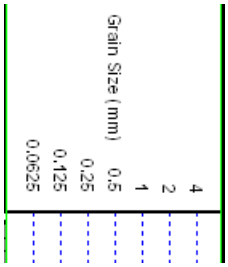


Grain Size Scale List box - You may choose between **Wentworth, Canstrat** or **Amstrat** scales, when using the **Grain Size Builder**. The Wentworth Grain size only allows full grain size while Canstrat / Amstrat allow half grain sizes when drafting in the Grain size and matrix layers.

Verbal Display: This radio button will display the **Grain Size Track header** with the equivalent verbal grain sizes such as such as C slt, VF snd, F snd, M snd, C snd etc.



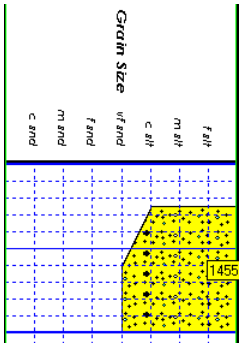
Verbal Scale



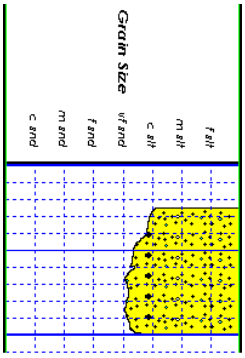
MM Scale

(mm) Display: This radio button will display the **Grain Size Track header** with the equivalent numeric grain sizes (in mm) such as .0625, .125, .25, .5, 1, 2 etc. as shown above.

Hard Edges This radio button will display the grain size with strait edges and right angles between the grain sizes. The illustration below is shown with Lithology Profile activated.



Hard Edges

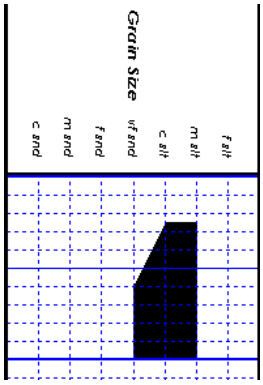


Soft Edges

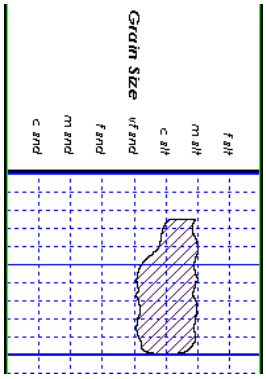
Soft Edges This radio button will display the grain size with curved edges and rounded angles between the grain sizes.

Grain Size Fill Pattern Upward hatch (left to right) at 45 degrees This drop box allows the user to select a hatching pattern when using the Grain Size Layer with the Lithology Profile not activate.

Grain Size Pattern Color: ... This color selector allows the user to pick the line color (foreground) when the fill pattern option is used. The background color is found in the Layer configuration for the Grain Size.



Grain Size No Pattern Hard edges



Grain Size Pattern Soft edges

Carbonate Texture Fill Pattern Upward hatch (left to right) at 45 degrees This drop box allows the user to select a hatching pattern when using the Carbonate Texture Layer with the Lithology Profile not activate.

Carbonate Texture Pattern Color: ... This color selector allows the user to pick the line color (foreground) when the fill pattern option is used. The background color is found in the Layer configuration for the Carbonate Texture Layer.

Carbonate Textures Hard Edges This radio button will display the grain size with strait edges and right angles between the Carbonate Textures. The illustration below is shown with Lithology Profile activated.

Carbonate Textures Soft Edges This radio button will display the grain size with curved edges and rounded angles between the Carbonate Textures.

Interpreted Lithology Layer - Show Bedding Contacts: -When this check box is activated the bedding contacts (lines) between the drawn lithology types in the Interpretive Lithology Layer will be shown.

Interpreted Lithology Layer - Show Accessories: When this check box is activated it will turn on the accessories in the Interpretive Lithology Layer.

Monitor Height - This option allows you to scale your monitor for Power*Log / Core so you may correlate on-screen wells with hard copy logs that you may have. It is recommended that you take an opportunity to measure the vertical viewing area of your monitor in inches and then insert that value in the **Monitor Height** field. Be aware, however, that if you adjust the screen height knob on your monitor, this will affect the monitor height setting.

Monitor Width - This option allows you to scale your monitor for Power*Curve so you may correlate on-screen wells with hard copy logs that you may have. It is recommended that you take an opportunity to measure the horizontal viewing area of your monitor in inches and then insert that value in the **Monitor Width** field. Be aware, however, that if you adjust the screen width knob on your monitor, this will affect the monitor width setting.

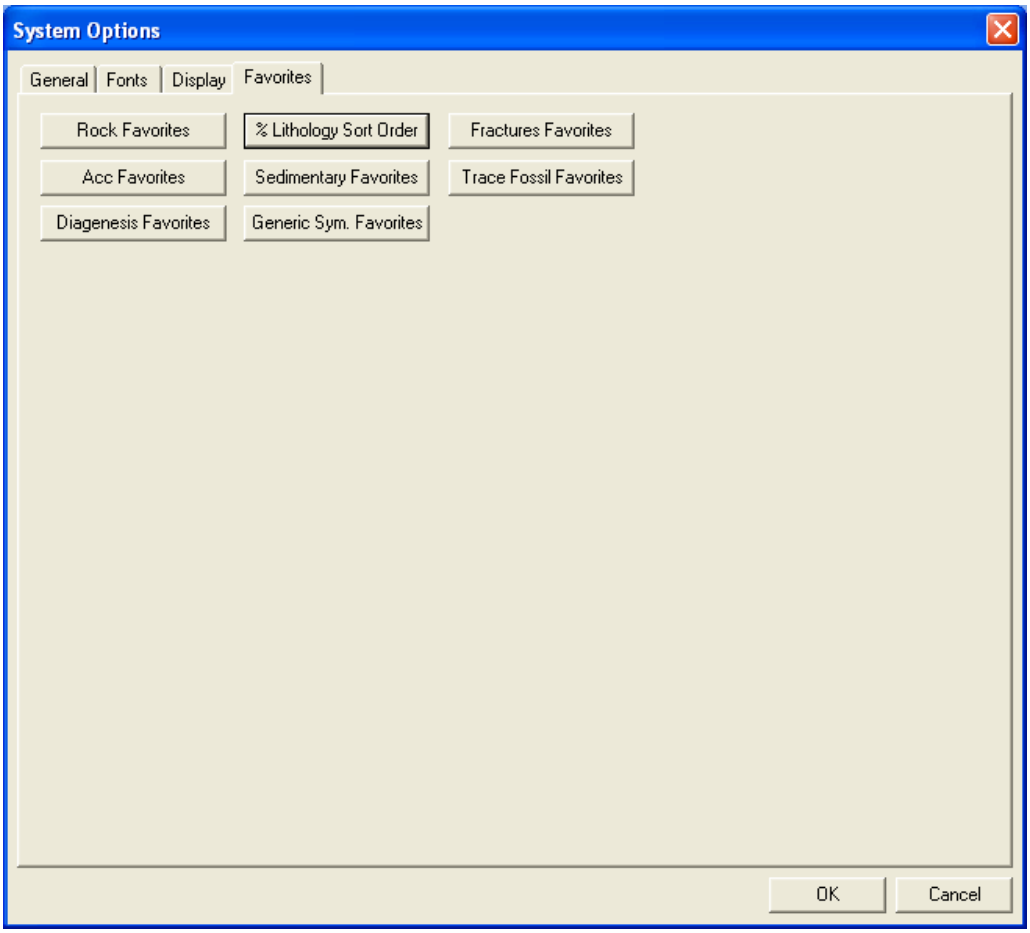
Note: You must restart **Power*Log / Core & Curve** for the **Monitor Width / Height** changes to take effect.

This drop box option will display your directional surveys on your log in either Quadrant format N 62 º W) or Azimuth format (AZ 298 º)

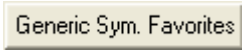
This check box when activated will display the Sidewall Core Run & Core numbers above the core triangle indicator on the Sidewall Core layer.

Revised Favorites Tab

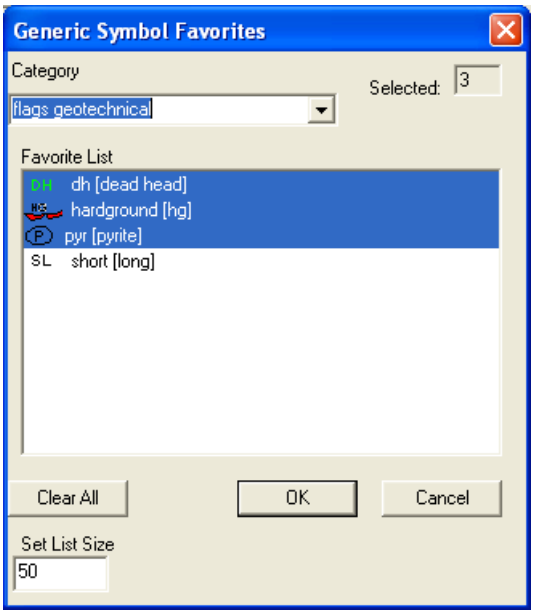
This tab allows the user to define their System favorites for all the data categories that support these choices. This tab dialogue also allows the user to access the % Lithology Sort order for the % Lithology Track.



How to Change the Generic Symbol Favorites Selection

1. **Click** on the 

button in the System Options window to activate the **Trace Fossils Favorites** window.



2. Utilize the Category Drop box to select your Generic Symbol Group.
3. **Click** on the Clear All **button** in the Generic Symbol Favorites list window to prepare it for the selection of your Generic Symbol Favorites.
4. Select by **clicking on** or highlighting some of your more **commonly used** Generic Symbol from the list window.
5. **Click** on the OK **button** to return to the System Options window.
6. **Click** on the Save **button** in the System Options window, when you are finished.

New - Generic Symbol Layer / Track

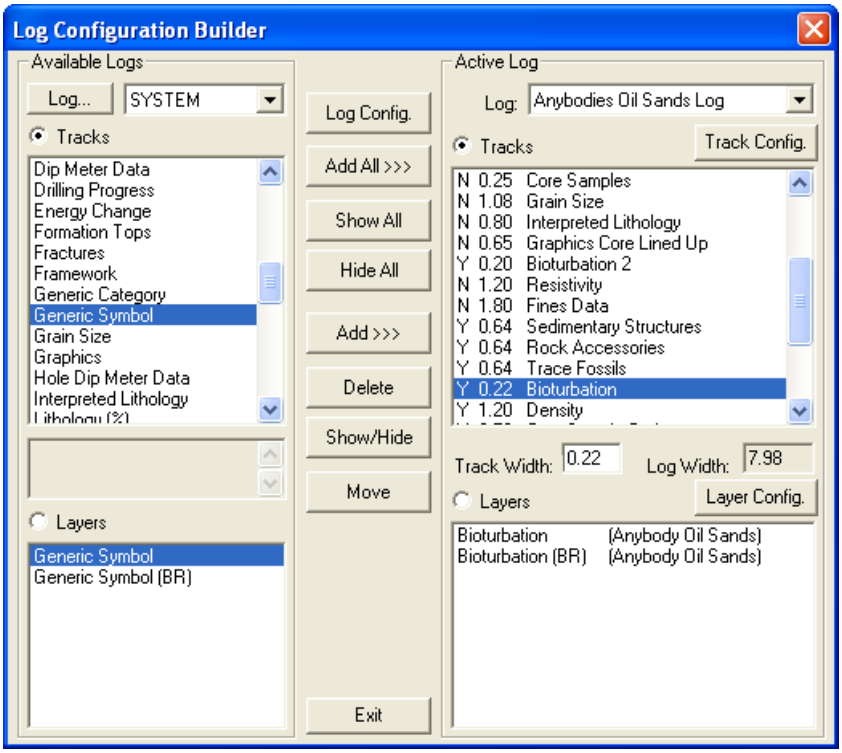
This layer allows you to add or delete **a Generic Symbol Category** that has not been offered in Version 10 in the Power*Core application. This will allow the user to create a set of user defined categories and subsequent symbols for a new category that can be represented by these symbols. There are two types of layers. There is a **Bed Restricted (BR)** and a **Non-Bed Restricted (NBR)** layer types.

The **bed restricted (BR)** layer type is like a typical rock property layer (sorting, rounding grain size) where you have to have a rock type in order to enter a diagenesis. The diagenesis is also restricted to the bed you are drawing in. Also, when the bed is resized or deleted the diagenesis symbol may be also resized or deleted if the diagenesis interval coincides with the beds resized or deleted interval.

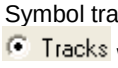
The **non-bed restricted (NBR)** layer type is not associated with any rock type or bed and can be entered anywhere the user wishes and will not be affected by the resizing or deleting of a bed.

How to Add a Generic Symbol Track

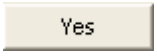
1. **Click** on **Log Configuration Builder** under the **Options** menu selection or **click** on the **Log Configuration Builder button** on the **Toolbar** to activate the Log Configuration Builder window:

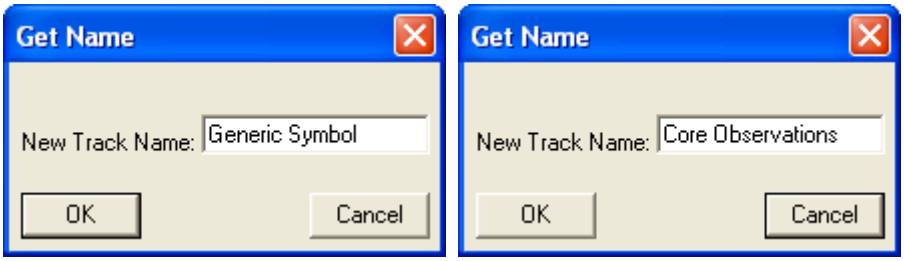


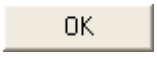
2. On the **left hand side of the Log configuration window** scroll down the list of tracks and **click** on the **Generic Symbol** track. The track will become highlighted and the **Tracks** radio button will become activated.

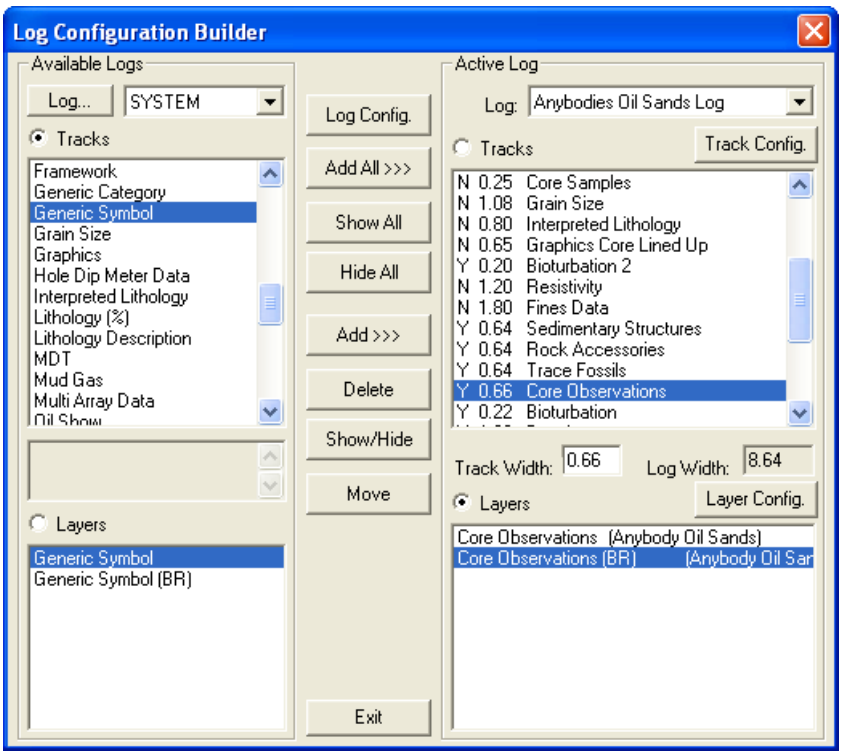
3. On the right hand side of the Log configuration window **click** on the Track you want it to go above or to the right of. In this example we will be adding the Generic Symbol track to the left of the Bioturbation. The track will become highlighted and the **Tracks** radio button  will become activated.

4. In the middle of the Log configuration window **click** on the **button**. This will activate a System Message asking the user "Do you really want to ADD the selected (TRACK) from the available log to the active log?"

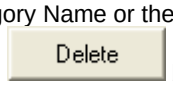
5. **Click** on the  **button.** This will activate a **Get Name** window allowing the user to name the track.



6. **Type in** a Track name (Generic Symbol) and then **click** on the  **button.** The track will be added above the **Bioturbation** Track or to the left on the log, and the Log Configuration Builder window will be shown.



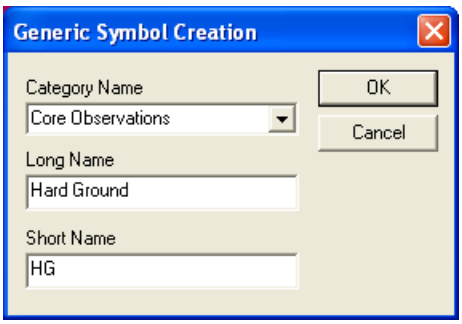
7. **Highlight** either the Category Name or the Category Name (BR) so that the Layers Radio button

is activated and **click** on the 

button to delete one of these layers. You will probably not want to use both layers on the log.

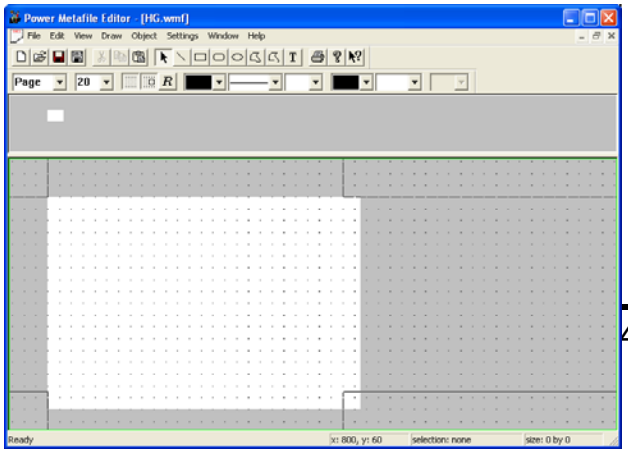
8. **Click** on the

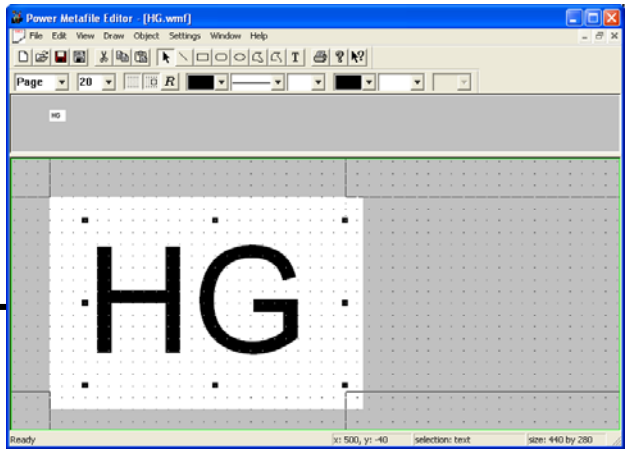
button. This will activate the **Log** with the new track and you will then prompted with adding a new Category and symbol for that category.



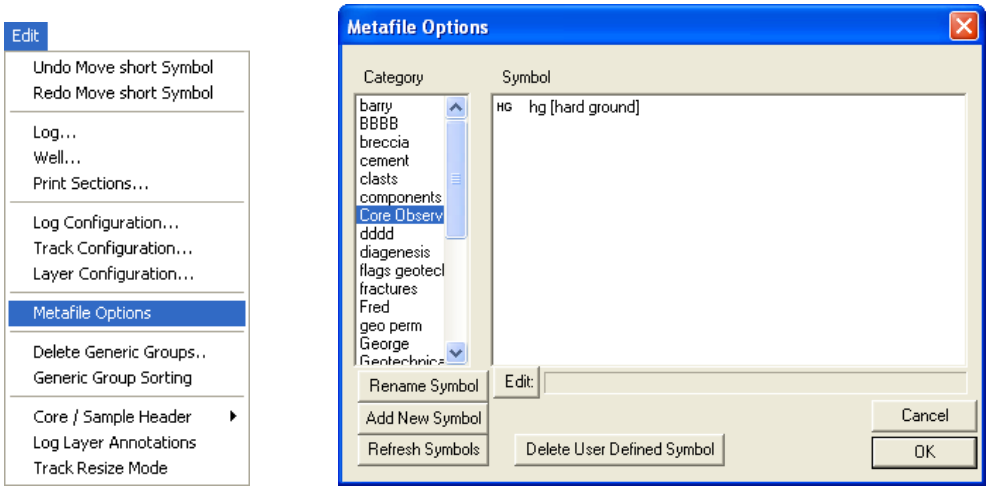
9. **Type** in the New **Category Name** you wish to create as well as the **Long** and **Short name** for a symbol to be added to this new category. **Click** on the

button. This will activate the Metafile Editor for you to draw the symbol that you have just named.





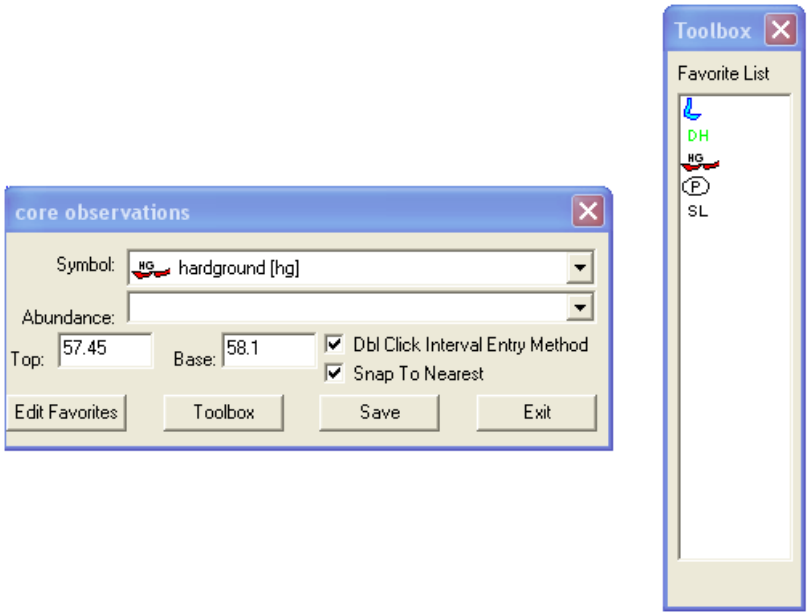
10. **Draw** your **symbol**. Please reference the Metafile Options selection under the Edit pull down menu to review how to draw you symbol. **Click** on the **button** when you are finished. You have now added 1 symbol to the new symbol category.
11. If you would like to add more symbols to the category you will now have to **click** on the **Edit Menu** selection and **select Metafile options** and then **highlight the category** you have just added and then **select** the **button** to add more symbols to your category.



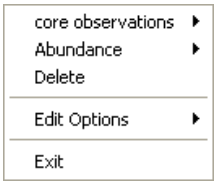
Adding a Generic Symbol

Note: All bed restricted description categories, such as **Generic Symbol (BR)**, are associated with a **Rock Type** and must have a **Rock Type** in order to be saved to the database. Therefore, you cannot add a diagenesis, until there is a rock unit or bed interval added to the **Interpreted Lithology Layer** for that interval.

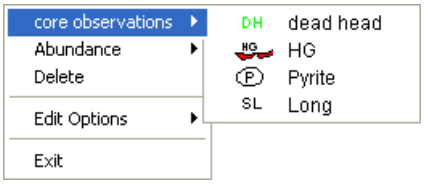
1. **Double click** on the **Generic Symbol track / layer** to activate the **Generic Symbol Builder** window and toolbox. The toolbox can be turned on or off by clicking on the button in the builder.



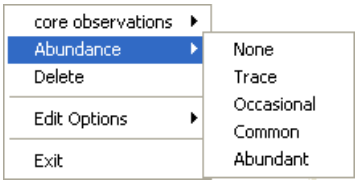
2. **Right click** anywhere on the Generic Symbol track / layer to activate the pop-up menu.



3. **Click** on the Generic Symbol (Core Observations) favorites list to activate the pop out menu and then select from the pop out list or click in the builders drop down menu selections to access the list provided in them. Either way once you have selected one it will be populated in the builder.



4. If abundance is required, **right click** on the existing diagenesis, **Click** on the **Abundance** selection to activate the pop out menu and then select from the pop out list or click in the builders drop down menu selections to access the list provided in them. Either way once you have selected one, it will be populated in the builder.



5. **Click and drag** the mouse on the track / layer over the desired interval. **Or** If you just **click your mouse** on the track / layer. This will insert a subinterval of whatever was selected in step 3 and will be added to the layer / track at the depth you clicked at. The interval size is defaulted to the screen scale accuracy setting. The Diagenesis interval will be drawn accordingly.

6. **Double Click** within an existing rock type interval in the Generic Symbol layer with the ☑ Dbl Click Interval Entry Method activated and the entire interval will be filled in with the attributes that have been entered into the Generic Symbol window.

7. **Click and drag** the mouse on the track / layer close to an existing Generic Symbol (either above or below in the same column) with the ☑ Snap To Nearest activated and there will be no spaces between the diagenesis. **Remember** you have to be within 10 times of the mouse pointer or screen accuracy from the previous symbol to have the snap to take effect.

Note: Regardless of the thickness of the interval that you have added to the log, **at least one symbol will be drawn in the middle of the interval**.

Tip: The **frequency of symbols** (if not utilizing the arrows subintervals) at any given scale is handled in the **Systems Options** window, under the **Options** menu selection. If you have selected 1 symbol every 2m at the **1:240** scale, you will get 1 symbol every 1m at the **1:120** scale, 1 symbol every 4m at the **1:480** scale, and so on.

8. Repeat **Steps 3** - **7** to add more Generic Symbol to the track.

Note: There are two ways how abundance can be shown. If in the System Options window you have checked ☑ Arrowed Subintervals option, each interval will be displayed with a different line style which specifies the abundance you have selected. E.g. if occasional, an interval arrow will be displayed as a dashed line, while if abundant, an interval arrow will be displayed as a thick solid line. Otherwise, all symbols within an interval will be displayed in the certain color which specifies the abundance you have selected. E.g. if occasional, symbols will be blue, on the other hand if abundant, symbols will be red.

9. Press the **Esc** key on the keyboard to exit from the **Generic Symbol Builder** window.

Resizing an Interval

1. **Double click** on the **Generic Symbol** track / layer to activate the **Generic Symbol Builder** window.

Mouse Pointer Method

2. **Press** the **Ctrl key down** on the keypad and **move the mouse pointer over the interval ends**. If done correctly the mouse pointer will turn into a resize cursor ↕.
3. **Click and drag the mouse** to the new desired top or bottom depth. **Release the mouse button** and the interval will be resized.

Keypad Method

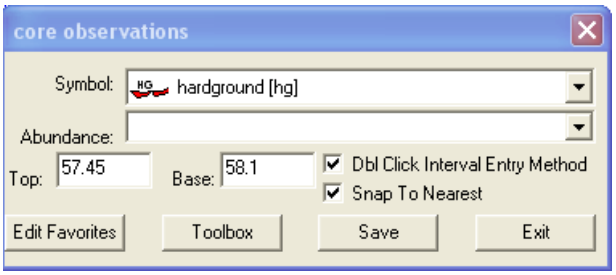
1. **Click once** on the Generic Symbol you want to resize to bring it into the builder and change the from or to depth and / or abundance and **click** on the Save **button**. Remember if it is a bed restricted layer that the top or bottom of the Lithology interval will take precedent.

Moving an Interval

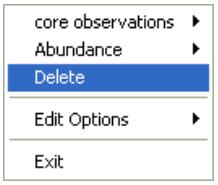
1. **Double click** on the **Generic Symbol** track / layer to activate the **Generic Symbol Builder** window.
2. **Move the mouse pointer over the interval** to be moved. **Click and drag** the interval to a new position. (The bed-restricted interval will not be allowed to move outside the interval of the lithology it is associated with.)

Deleting a Single Interval

1. **Double click** on the **Generic Symbol** track / layer to activate the **Generic Symbol Builder** window.



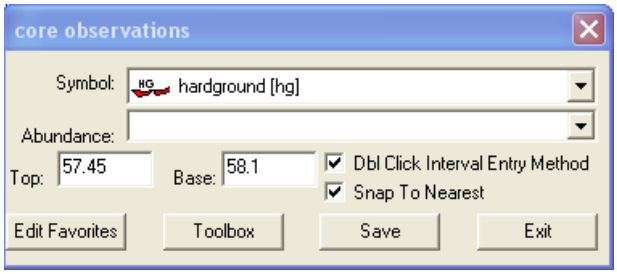
2. **Right click** anywhere <u>within</u> the interval you wish to delete to activate the pop-up menu.



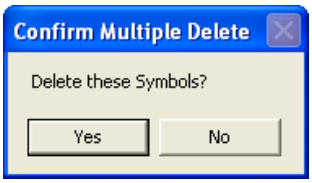
3. **Click** on **Delete** and the interval will be deleted accordingly.
4. Repeat **Steps 2** and **3** to delete more **Generic Symbol** intervals from the **Generic Symbol** track / layer.
5. Press the **Esc** key on the keyboard to exit from the **Generic Symbol Builder** window.

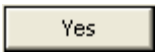
Deleting Multiple Intervals

1. **Double click** on the **Generic Symbol** track / layer to activate the **Generic Symbol Builder** window.



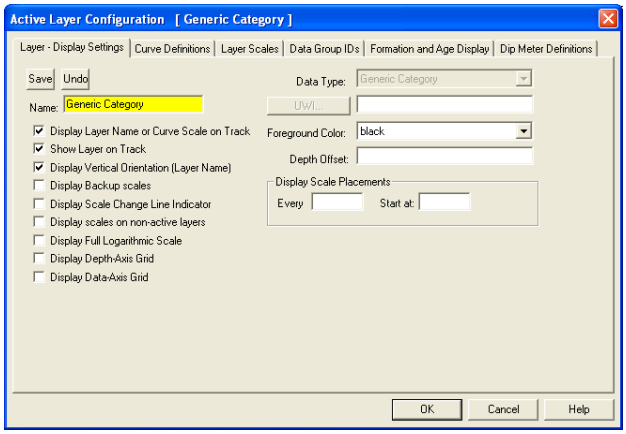
2. **Press and Hold the SHIFT Key** and then **click and drag an area** anywhere <u>within</u> the intervals you wish to delete.
3. **Release the mouse button** to activate a Confirm Multiple Delete message.

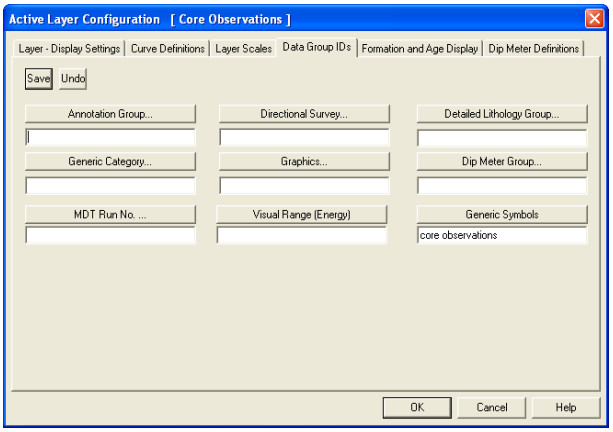


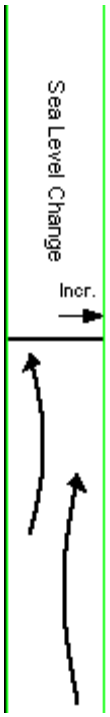
4. **Click** on  **button** and the **Generic Symbol** intervals encompassed with your drag will be deleted accordingly.

5. Press the **Esc** key on the keyboard to exit from the **Generic Symbol Builder** window.

<u>Note</u>: Every type of layer in **Power*Log, Power*Core and Power*Curve** has a **Data Type** classification. The default settings for the **Generic Symbol** layer are shown below. To access this window, click on the **Layer Configuration button** on the **Toolbar**, when the **Generic Symbol layer** is active.





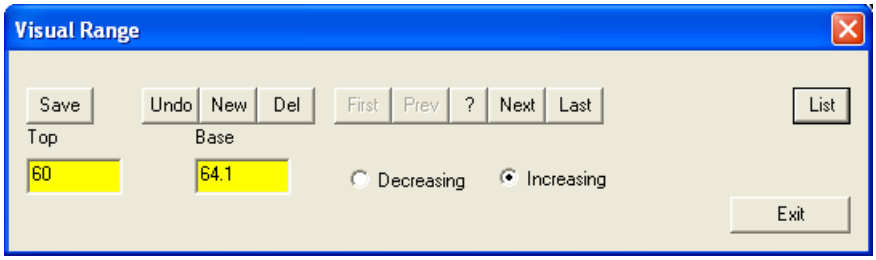


New - Energy / Sea Level Change Layer

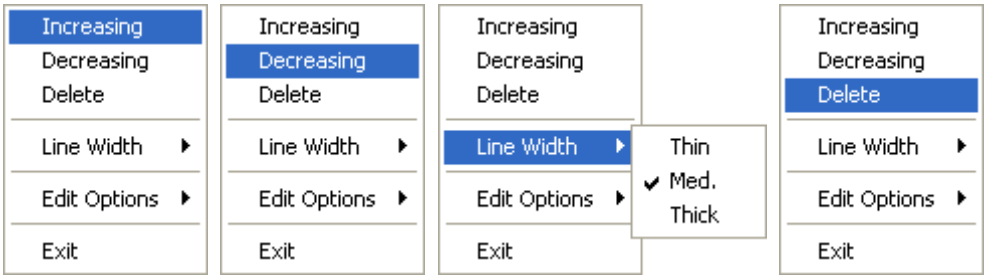
This layer has the ability graphically represent a change with an arrow either increasing or decreasing in an upward direction. .

How to enter a Visual Change interval.

1. **Double Click** on the **Visual Change Layer** to activate the Visual Change Data Entry Window. If the Visual Change window has data filled in **Click** on the New **button or press ALT-N** and then fill in a new record.



2. Define the desired interval by **clicking and dragging** the mouse pointer within the Visual change layer track. The interval will be drawn accordingly.
3. The user can right click on the symbol area and change the arrow direction the line arrow size or delete the arrow altogether.



4. The user can also **type** in the **Top Depth, Base Depth and select either** Decreasing Increasing **radio buttons**. The user can use the **TAB key** on the keypad to advance through the data entry fields and **Shift Key and TAB key** simultaneously to go backwards through the data entry fields.
5. **Click** on the Save **Button** to save the record.
6. **Repeat** steps **2-3** for more entries.
7. **Click** on the Exit **Button** to close the data entry window or click on the in the upper left corner.

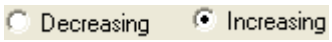
Resizing an Interval

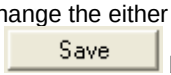
1. **Double click** on the **Visual Display** track / layer to activate the **Visual Display Builder** window.

Mouse Pointer Method

2. **Press** the **Ctrl key down** on the keypad and **move the mouse pointer over the interval ends**. If done correctly the mouse pointer will turn into a resize cursor .
3. **Click and drag the mouse** to the new desired top or bottom depth. **Release the mouse button** and the interval will be resized.

Keypad Method

2. **Click once** on the **Visual Display** you want to resize to bring it into the builder and change the either the number in the from depth or to depth and / or 

and **click** on the 

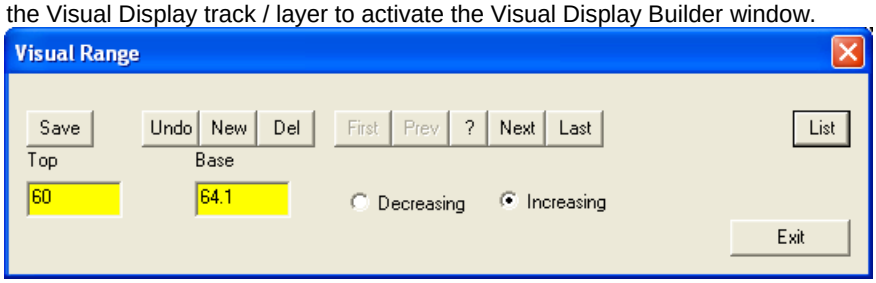
button.

Moving an Interval

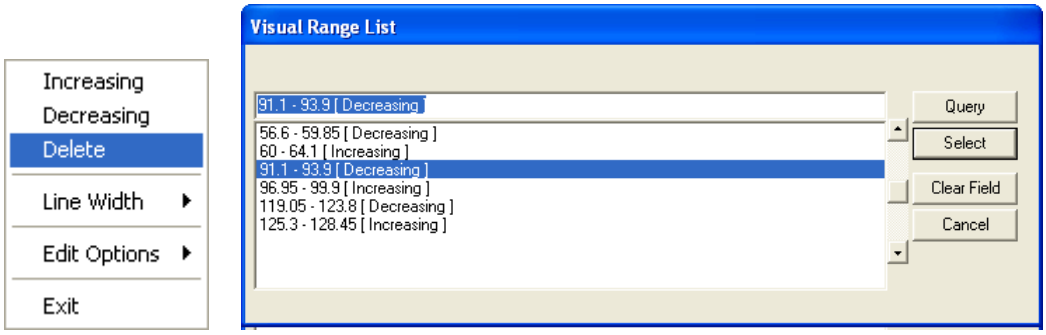
1. **Double click** on the **Visual Display** track / layer to activate the **Visual Display Builder** window.
2. **Move the mouse pointer over the interval** to be moved. **Click and drag** the interval to a new position. (The bed-restricted interval will not be allowed to move outside the interval of the lithology it is associated with.)

Deleting an Interval

1. Double click on the Visual Display track / layer to activate the Visual Display Builder window.



1. **Right click** anywhere within the interval you wish to delete to activate the pop-up menu.

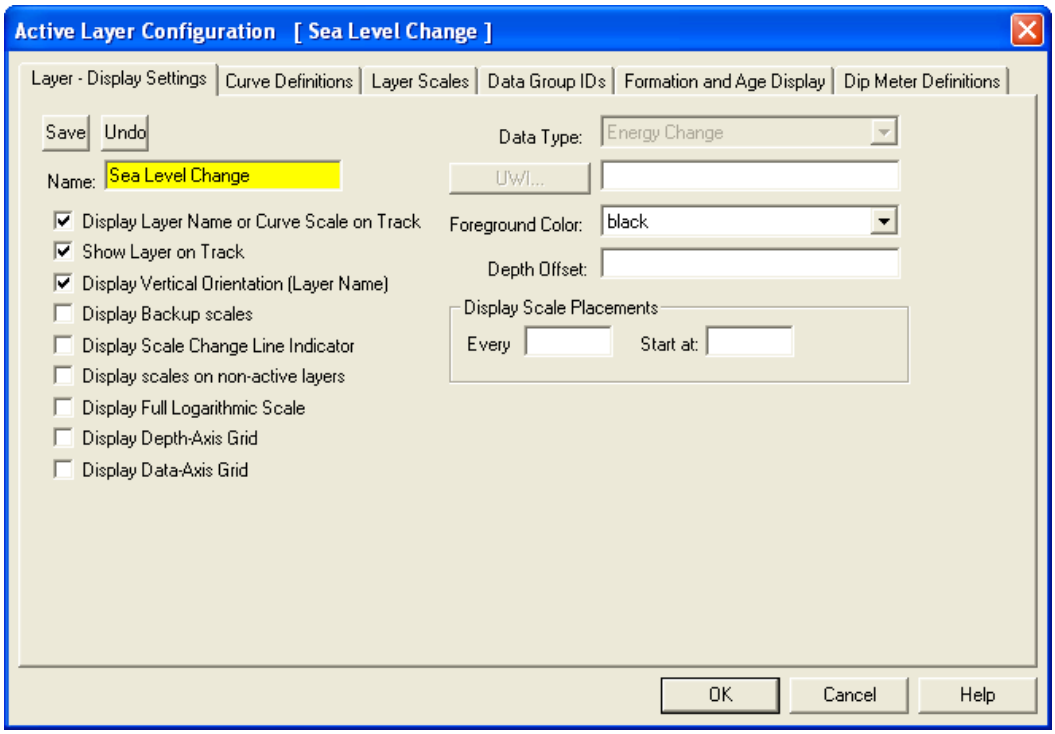


2. **Click** on **Delete** and the interval will be deleted accordingly.
3. The user can also **click** on the

button. This will activate a list of intervals drawn to date. Select from the list by double clicking. **Click** on the

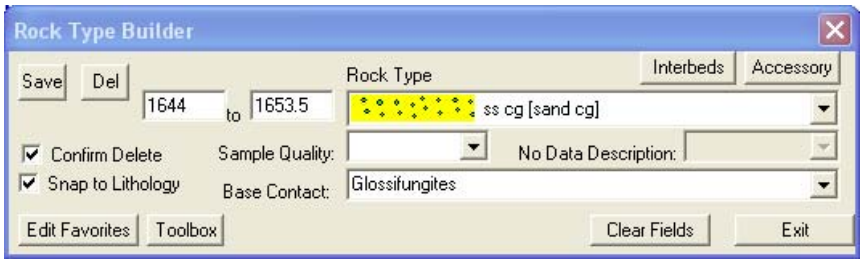
button in the builder and the interval will be deleted accordingly.
4. Press the **Esc** key on the keyboard to exit from the **Generic Symbol Builder** window.

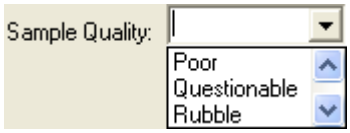
Note: Every type of layer in **Power*Log, Power*Core and Power*Curve** has a **Data Type** classification. The default settings for the Visual Change is shown below. To access this window, click on the **Layer Configuration button** on the **Toolbar**, when the Visual Change layer is active.



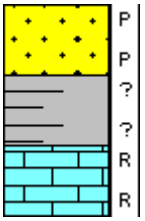
Revised Interpreted Lithology Layer - Rock Type Builder Revised

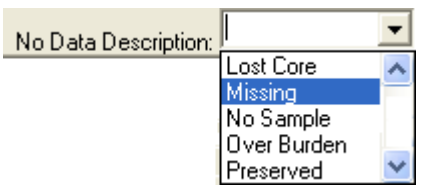
The revisions to this builder have been to the drop lists. In the Sample Quality List we have added Rubble to help out our core loggers. We have also added Preserved and Missing to No Data list and last but not least we have added Questionable and Not visible to our Contacts list.



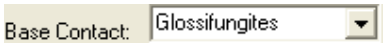


The **Sample quality** further defines the lithology interval with one of the three qualities such as Questionable, Poor or Rubble core / sample quality symbols as shown on the right.



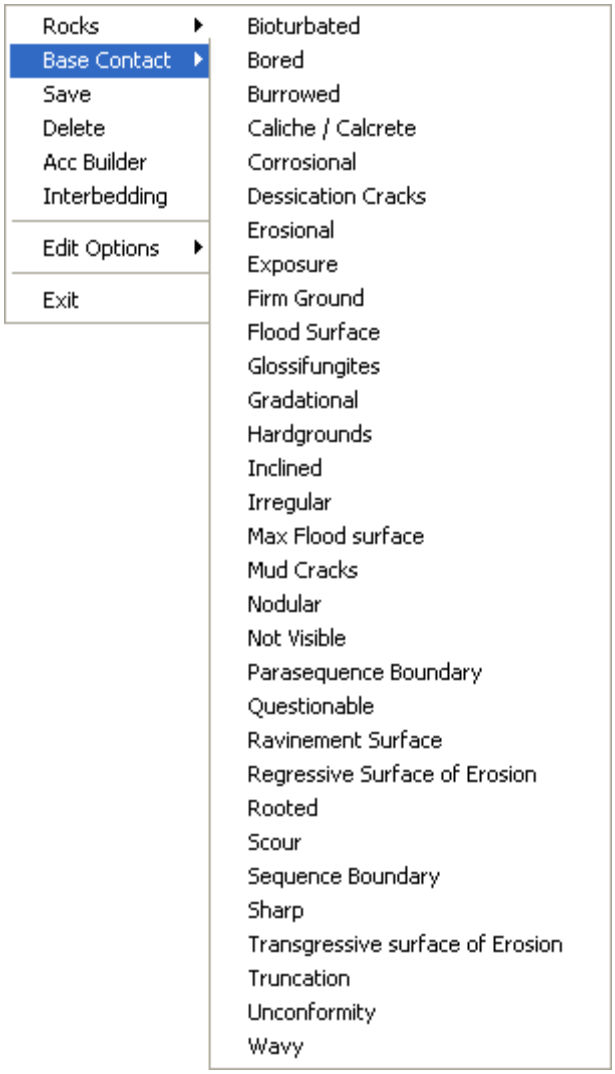


The **No Data Description** selection allows the user to define a Lithology interval on the log with one of the no data descriptions as shown on the right.



The Base Contact Selection allows the user to add a basal contact to an existing Lithology interval.

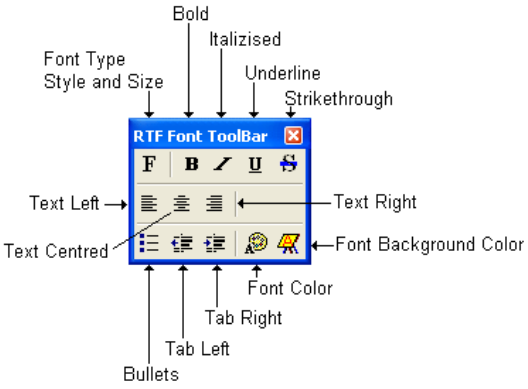
This list can be viewed from either the drop box in the Rock Type builder or by right clicking on the drawn interpretive lithology interval.

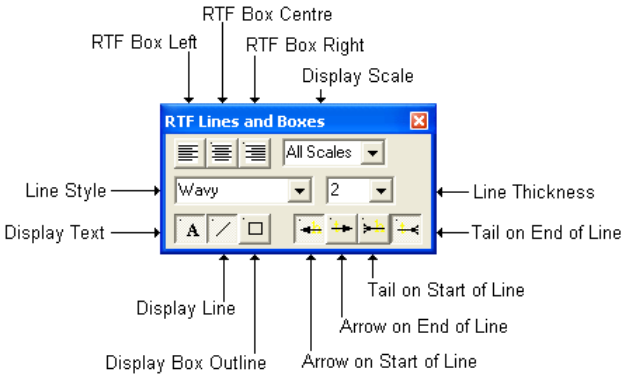


Revised Annotation Layer

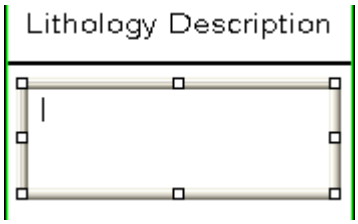
Adding Annotations / Lithology Descriptions…

1. Make a Lithology Description or Annotation layer active by **clicking** on the **track** that has an Annotation layer on it and then **selecting** that annotation layer you want to work with from the **Layer Section list** on the **Selection Toolbar**.
2. **Define an area or box outline** by **clicking and dragging** the **left** mouse button from the upper left corner to the lower right corner of the desired area to form a rectangular shape and then releasing the **left** mouse button on an **Annotation** layer to activate the RTF Font and RTF Lines and Boxes toolbars shown below.





3. **Click** once more **in the drawn area** and you will get a flashing cursor.

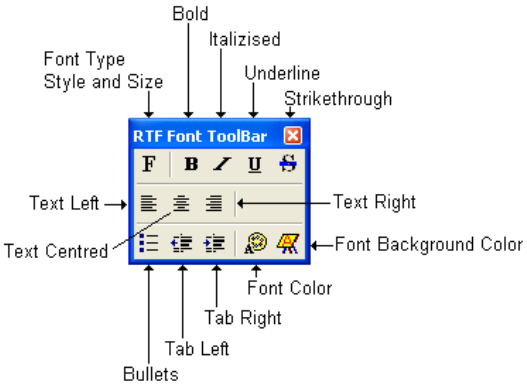


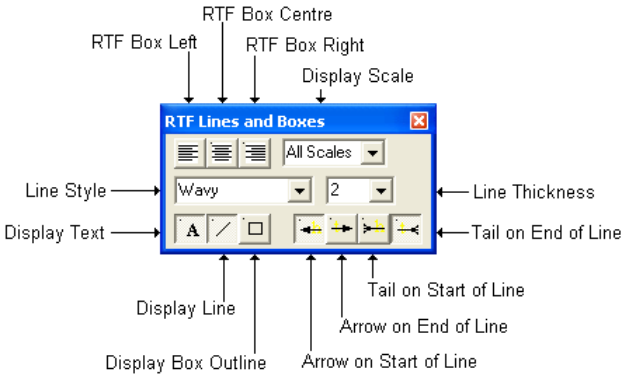
4. **Type in your annotation.**
5. Utilize the options in the **RTF Font** and **RFT line and box toolbars** to get the desired effect on your annotation. To change individual font characteristics you would highlight the font by clicking and dragging and then select the button from the toolbar or utilize the user **right click inside the annotation field** and **select** the **Apply formatting** selections to change the font style color etc.

6. If you would like to **undo** the last action taken within an annotations formatting the user can **right click inside the annotation field** and select the **Undo Last formatting** selection.
7. **Click anywhere outside** the **annotation box** to close the toolbars. **Repeat** steps **2-6** for more annotations.

Drawing a Line…

1. Make a Lithology Description or Annotation layer active by **clicking** on the **track** that has an Annotation layer on it and then **selecting** that annotation layer you want to work with from the **Layer Section list** on the **Selection Toolbar**.
2. **Define an area or box outline** by **clicking and dragging** the **left** mouse button from the upper left corner to the lower right corner of the desired area to form a rectangular shape and then releasing the **left** mouse button on an **Annotation** layer to activate the RTF Font and RTF Lines and Boxes toolbars shown below. **Or** just **click on** an **existing** annotation that does not have a line associated with it.





3. **Click** and **drag the mouse** and a line will be drawn. The drag must start anywhere outside the highlighted or drawn area of your highlighted annotation and inside the confines of the track and remain inside the track boundaries.
4. **Release the mouse** and the line will be drawn. Utilize the buttons for arrow heads and tails. Also line style and thickness drop boxes can be used to further define your drawn line.
5. **Repeat step 3** to redraw the line**.**
6. **Click anywhere outside** the **annotation box** to close the toolbars. **Repeat** steps **2-6** for more annotations.

Editing Annotations/Lithology Descriptions…

1. Make the Lithology Description or Annotation layer active by **clicking** on the **track** that has an Annotation layer on it and then **selecting** that annotation layer you want to work with from the **Layer Section list** on the **Selection Toolbar**.
2. **Click** in **annotation field box** to highlight the field and activate the RTF Toolbars.
3. Edit this field as you normally would utilizing the keypad, mouse and toolbars to edit anything inside this annotation field or add a line.
4. **Click outside** of the highlighted text field to close the toolbars.

Resizing Annotations/Lithology Descriptions…

1. Make a Lithology Description or Annotation layer active by **clicking** on the **track** that has an Annotation layer on it and then **selecting** that annotation layer you want to work with from the **Layer Section list** on the **Selection Toolbar**.
2. **Click** in **annotation field box** to highlight the field and activate the RTF Toolbars.
3. Place the mouse pointer over one of small boxes (☐) used to define the outline around the **Annotation/Lithology Description** and the mouse pointer will transform into a double arrow(⇳).
4. **Click** and **drag** the mouse pointer to define the new size for the **Annotation**.
5. **Release** the **mouse button**, and the Annotation/Lithology Description will be redrawn within its newly defined area.
6. **Click outside** of the highlighted text field to close the toolbars.

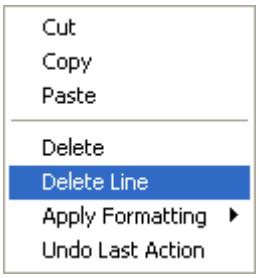
Moving Annotations/Lithology Descriptions…

1. Make a Lithology Description or Annotation layer active by **clicking** on the **track** that has an Annotation layer on it and then **selecting** that annotation layer you want to work with from the **Layer Section list** on the **Selection Toolbar**.
2. **Click** on **annotation field box** to highlight the field and activate the RTF Toolbars.

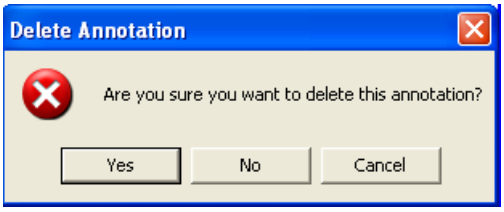
3. **Move** the mouse pointer on the highlight surrounding the selected **Annotation/Lithology Description** and the mouse pointer will transform into the shape of a cross with four arrows.
4. **Click and drag** the mouse pointer to the **Annotation's/Lithology Description's** new position.
5. **Release** the mouse button, and the **Annotation/Lithology Description** will be redrawn at its new location.
6. **Click outside** of the highlighted text field to close the toolbars.

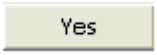
Deleting Annotations/Lithology Descriptions…

1. Make a Lithology Description or Annotation layer active by **clicking** on the **track** that has an Annotation layer on it and then **selecting** that annotation layer you want to work with from the **Layer Section list** on the **Selection Toolbar**.
2. **Click** in **annotation field box outline** to highlight the field and activate the RTF Toolbars.
3. **Right Click** anywhere **within the Annotation field** that is highlighted to activate the pop-up menu.



4. **Click** on the **Delete** selection and you will receive the following system message.

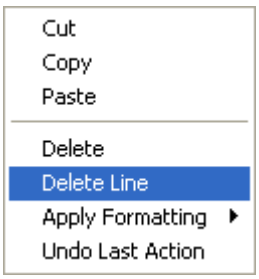


5. **Click** on 

button and the selected Annotation/Lithology Description will be deleted accordingly.
6. **Click outside** of the highlighted text field to close the toolbars.

Deleting Lines associated with Annotations…

1. Make a Lithology Description or Annotation layer active by **clicking** on the **track** that has an Annotation layer on it and then **selecting** that annotation layer you want to work with from the **Layer Section list** on the **Selection Toolbar**.
2. **Click** in **annotation field box outline** that is associated with the line to highlight the field and activate the RTF Toolbars.
3. **Right Click** anywhere **within the Annotation field** that is highlighted to activate the pop-up menu.



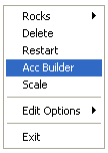
4. **Click** on **Delete Line selection** and the Line will be deleted and the Annotation toolbars will automatically close for you.

Revised Detailed Lithology Layer - Rock Accessory Builder

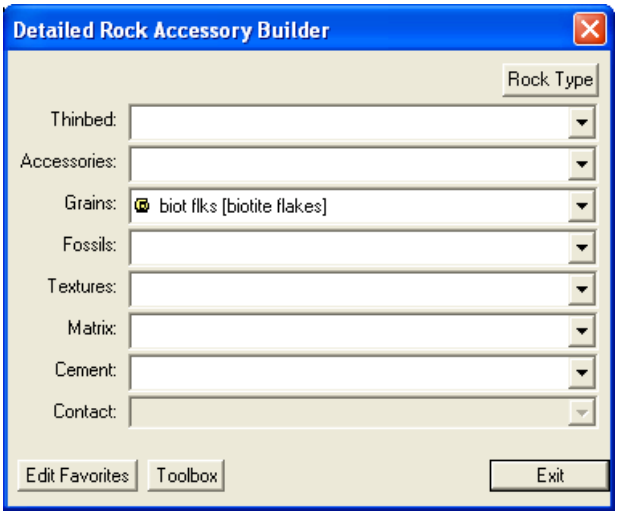
The Rock Accessory Builder allows you to add accessories to the Detailed Lithology layer.

Drawing Accessories

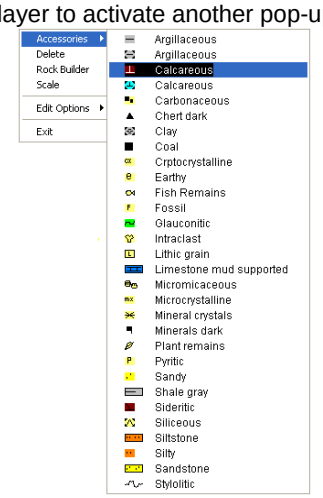
1. **Double click** anywhere within the **Detailed Lithology** layer to activate the Detailed **Rock Type Builder.**
2. Then, **right click** anywhere within the **Detailed Lithology** layer to activate the pop-up menu shown below, or **click** on the Acc **button** in the **Detailed Rock Type Builder** window:



3. Select **Acc Builder** selection from the pop-up menu to activate the **Rock Accessory Builder** window and the **Accessory Favorites List Toolbox**.



4. **Select** the **Accessory from the Toolbox** by clicking on the accessory you wish to use **or right click** again anywhere within the **Detailed Lithology** layer to activate another pop-up menu.



Note: The graphical images utilized in the pop-up menu represent specific **Accessories** selected by the user in the **System Options** window (See the **System Options** section.

5. **Click** on the appropriate **Accessory** symbol from the pop-up sub-menu and the **corresponding** field in the **Rock Accessory Builder** window will automatically be filled in with the selected **Accessory**. You may also select a **Rock Accessory** from the **Thinbed, Components, Matrix and Cement** fields within the **Rock Accessory Builder** window, if the desired **Rock Accessory** is not displayed in the Accessory Favorite List Toolbox or the pop-up menu.

   Note: The user can get easily to the first letter of the Accessory they wish to select by clicking once in the appropriate field in the Rock Accessory builder to highlight a selection and then typing in the first letter of the component they wish to choose. This will refresh the list with the first letter and then the user can scroll through the selection until they see their selection and **click** to select.

6. **Click** anywhere within an existing **Detailed Lithology** to insert the desired **Accessory**/**Accessories**.

   The Toolbox can be activated or deactivated by clicking on the Toolbox **button** within the Rock Accessory Builder Window.

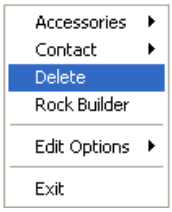
Revised Detailed Lithology Accessory Builder

New - Moving a Thinbed, Components, Internal Contact, Matrix, or Cement

1. With the **Rock Accessory Builder** window activated **click and drag** the **Accessory symbol** you wish to move and drag the red box to the new location.
2. **Release the mouse button** and the accessory will be redrawn at the position.

Deleting a single Thinbed, Components, Internal Contact, Matrix, or Cement

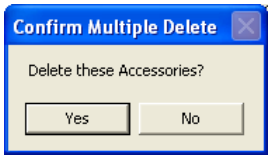
1. With the **Rock Accessory Builder** window activated **right click** (in the upper right corner) of the **Accessory** symbol you wish to delete and the pop-out menu will be activated.



2. **Click** on the **Delete** selection from the pop-out menu and the selected **Accessory** symbol will be deleted.
3. Press the **Esc** key on the keyboard to exit from the **Rock Accessory Builder** window.

New - Deleting Multiple Thin beds, Components, Matrix, or Cements

1. With the **Rock Accessory Builder** window activated **Press and Hold the SHIFT Key** and then **click and drag an area** where the symbols are that you want to delete.
2. **Release** the **mouse button** and this will activate a message.

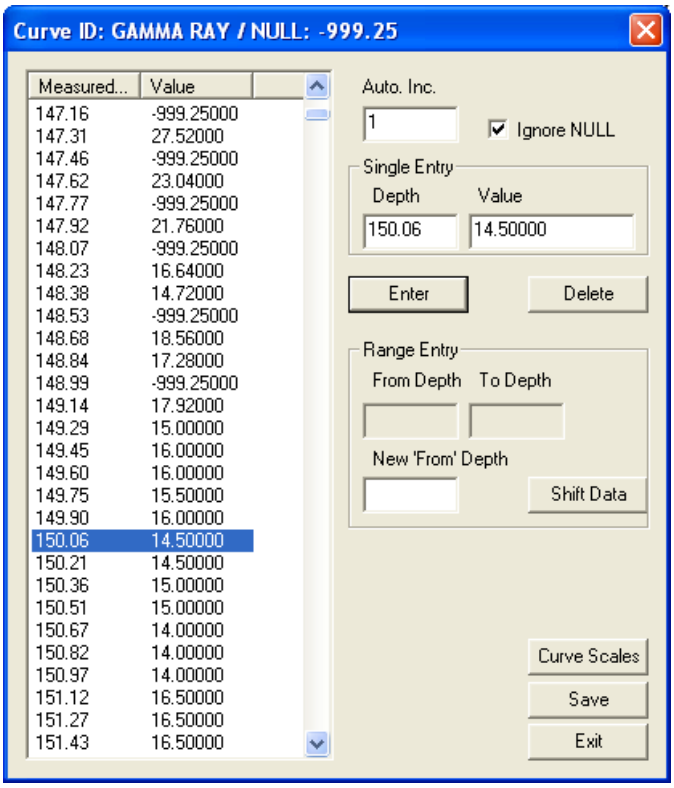


3. **Click** on the Yes button. The accessories that were covered by your drag will be deleted.

New Curve Editor

Editing or Adding Values to Curves

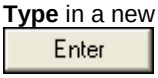
The following steps will show you how to edit curves and add values to an existing curve layer.



The **Ignore Nulls** check box when activated draws a continuous curve in the pattern predefined in the Curve Layer. When it is deactivated the curve will be a discontinuous curve if there are any null values associated with the curve data.

How to Add values to a Curve from the Curve Editor window.

1. To access the **Curve Editor** window, make the curve layer that you wish to edit, the active layer within an active track (see **Layers Organizer** or **Layer Selection List**).
2. **Double click** on the layer to activate the curve layer's **Curve Editor** window shown above.
3. If you wish to go to a specific depth in the list, **click** on the thumb and drag it or you can also search for a depth by simply scrolling down the list.
4. Set the **Auto increment field** to the depth increment for the curve values you are entering. This will then automatically increment the depth entered by this value when you enter the value.
5. **Type** in a depth in the depth field and then **tab** to the value field and **type** in a **value**.
6. Press the **Enter** key on your keypad or **click** on the

button when done and the depth / value will be entered into the list, resulting in the depth being advanced by the number specified in the **Auto Depth Increment** field.
7. **Type** in a new **value** for the corresponding depth and either **Press** the **Enter** key on your **keypad** or **click** on the 

button.

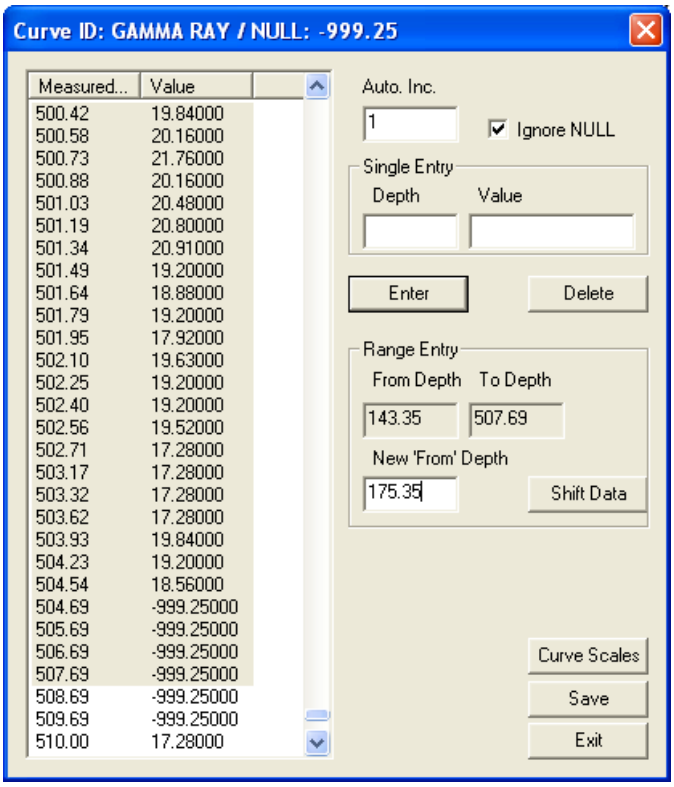
N.B. ***If the number in the **Value field is the same as the previous number, then just press **Enter** key on your keypad and the program will advance it for you automatically, thereby preventing you from having to re-enter the same number into the **Value** field twice.

8. When you are finished entering your data **click** on the Save **button**.
9. Then either **click** on the Exit **button** or **click** on the to close the window.

If you have no values for specific depths, you must enter the **Null Value** for the curve, which is displayed in the Header Portion of the window. The **Null Value** is a numeric value that symbolizes **No Data** for a particular depth point. If you have no data for a particular depth, type in the **Null Value** for that depth and your curve will not be drawn for that portion.

How to Edit a value in the list from the Curve Editor window.

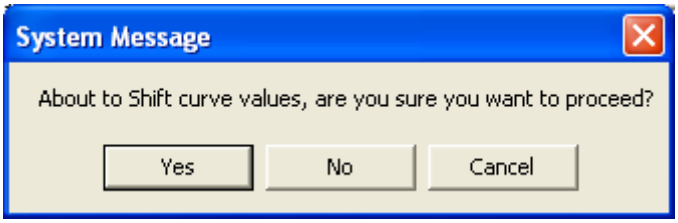
1. To access the **Curve Editor** window, make the curve layer that you wish to edit, the active layer within an active track (see **Layers Organizer** or **Layer Selection List**).
2. **Double click** on the layer to activate the curve layer's **Curve Editor** window shown above.
3. If you wish to go to a specific depth in the list, **click** on the thumb and drag it or you can also search for a depth by simply scrolling down the list.
4. To edit a value given to a specific depth, **Click** on the **depth / value** to place it in the single entry fields.
5. **Click** in the **Value** field and **type** in the new value you wish to assign to the depth.
6. Press the **Enter** key on your keypad or **click** on the Enter **button** when done and the depth / value will be entered into the list, resulting in the depth being advanced by the number specified in the **Auto Depth Increment** field.
7. When you are finished entering your data **click** on the Save **button**.
8. Then either **click** on the Exit **button** or **click** on the to close the window.

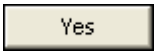


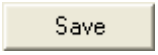
How to Shift values from the Curve Editor window.

1. To access the **Curve Editor** window, make the curve layer that you wish to edit, the active layer within an active track (see **Layers Organizer** or **Layer Selection List**).
2. **Double click** on the layer to activate the curve layer's **Curve Editor Window** shown above.
3. To enter the depth range for the interval of the curve that requires shifting the user must first **click** on the **top value** in the list. Then scroll down to the last value that needs to be shifted and hold the **SHIFT key down** on your keypad and **click** on the last value. This will fill in the From Depth and To Depth fields.
4. Then, **type** in the New from depth to where this portion of curve will be placed and then **click** on the

button. This will activate a system message.



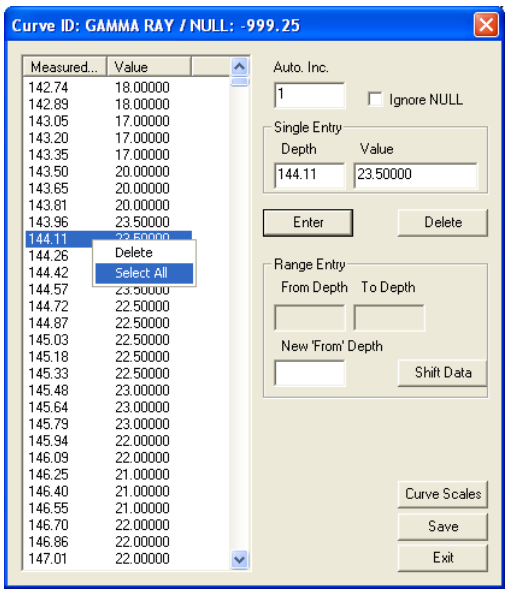
5. **Click** on the 

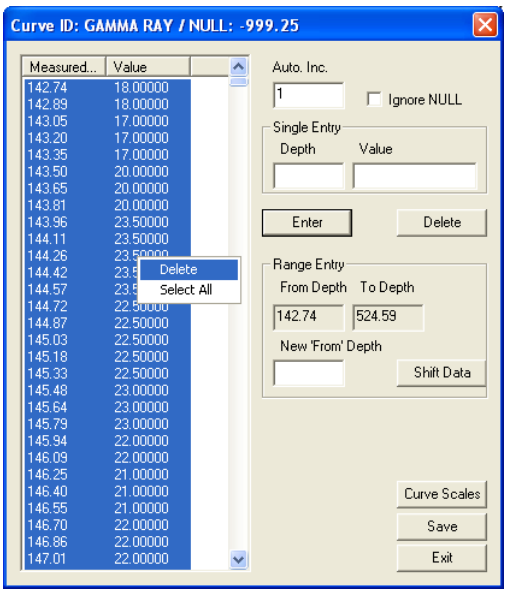
button.
6. Then **click** on the 

button and then **click** on the

button.

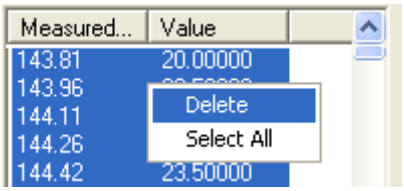
Note: When you shift portions of curves, anything that existed at the "***New From Depth***" value will be overwritten. The example above shifts the curve data down 32.





How to delete values in the Curve Editor window.

1. To **delete a single value depth** and its assigned value, highlight it on the list and then **click** on the Delete **Delete button** or **right click** on the value in the list and **select delete**.



2. The user has the ability now to **delete multiple values** at once by highlighting specific values by utilizing the CTRL key and clicking on the specific depth / value rows in the list. Then **click** on the Delete **Delete button** or **right click** on the value in the list and **select delete** from the pop out menu.
3. The user has the ability now **to delete a range of values** at once by highlighting a specific value by utilizing the SHIFT key and clicking on the specific depth / value rows in the list. Then **click** on the Delete **Delete button** or **right click** on the value in the list and select delete from the pop out menu.
4. The user has the ability now **to delete all the values** at once by right clicking on the list of values and selecting the **select all** to highlight all the values. Then **click** on the Delete **Delete button** or **right click** on the value in the list and **select delete** from the pop out menu.
5. When you are finished editing or adding to your curve, **click** on the Save **button** and then **click** on the Exit **button**

New Curve Fill Layer

In **Power*Suite**, this layer type allows you to create a visual effect with curve data. This layer will allow you to fill an area between 1 curve and a track edge, fill to a value, fill from a value or surround a curve (eg. 1/2" either side of a curve). You also have the ability to set 2 curves and to fill between two curves, fill when one curve is greater or when one curve is lesser than the other curve. The curve fill options can be a solid color, a hatched color, a single lithology or the interpretive lithology.

How to Add a Curve Fill layer to an existing log

Click on **Log Configuration Builder**, under the **Options** menu selection, or use the **Log Configuration Builder button** on the Toolbar to activate the **Log Configuration Builder** window.

If you do not see the SYSTEM name beside the

button then, **click** on the

button at the upper left corner of the **Log Configuration Builder** window to activate the **Log Format List** window.

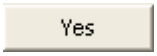
Select the **SYSTEM [SYSTEM]** from which to take available tracks or layers by **double clicking** on one of the **SYSTEM Logs** in the **Log Format List** window.

On the left side of the window, **click** on the **Curve Fill Track** containing the Curve fill layer.

Click on the **Curve Fill Layer**, that you wish to add to your log, within the **Layers** section on the left side of the **Log Configuration Builder** window.

On the right side of the window, **highlight the track** that you wish to add the selected Curve Fill layer to.

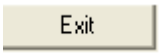
1. **Click** on the

button to add the selected layer to the track on your log and the following system message will be activated, "***Do you want to ADD the selected <LAYER> from the available log to the active log?***"
2. **Click** on the 

button to activate the **Get Name** window.
3. You now have the option of either renaming the layer or simply leaving it with its original name.

Note: Two layers cannot share the same name. Accordingly, no layer will be added to your track if they share the same name as a layer that already exists on the active(your) track.

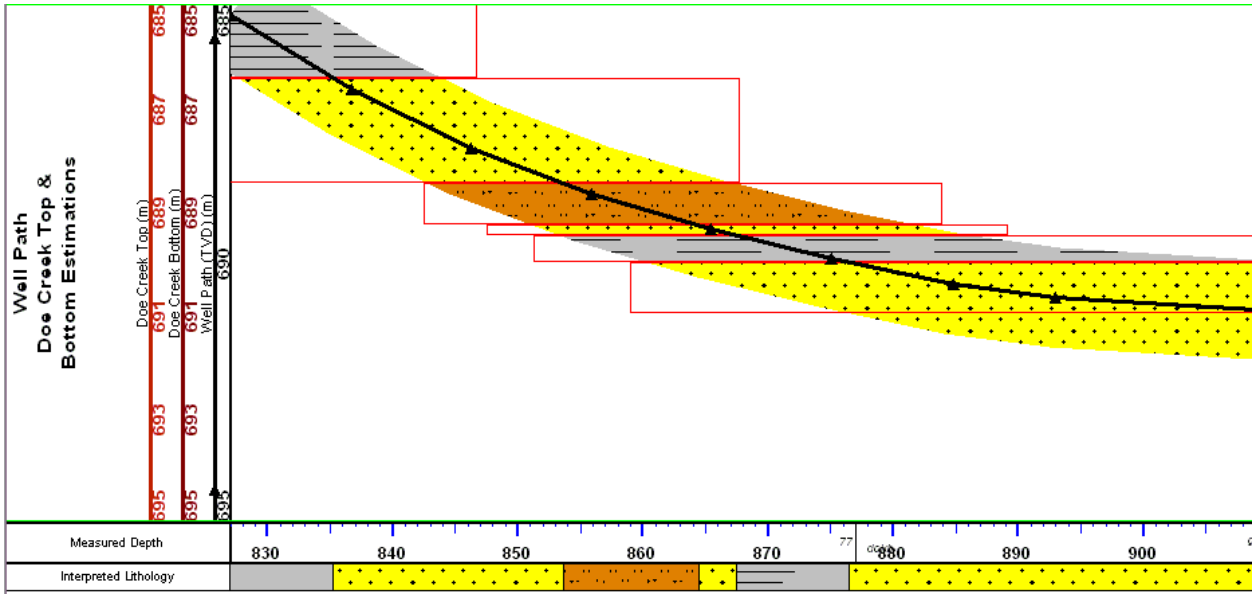
4. **Click** on the

button to add the layer to your log and place its name in the active **Layers** list on the right side of the **Log Configuration Builder** window.
5. **Click** on the 

button to get out of the Log Configuration Builder Window.

New - Curve Fill Layer (Well Path Option on Single Curve)

In **Power*Suite**, this layer type allows you to create a visual effect with curve data. This layer will allow you to fill an area surrounding the well path curve (e.g. 1/2" either side of a curve). It has been designed to take the interpretive lithology drawn and surround the well path curve in the Horizontal (Power*Curve) application. It will also be beneficial when the correlational module has been perfected. The user now has the ability to manipulate the angle of the bedding contacts and the extend of those beds past the areas previously drawn. An example is shown below.



How to Set the Well Path Curve Fill options

You will need the well path curve and the well path curve scale available for the user to be able to fill in the options correctly. The easiest way to populate the well path curve with digits would be by calculating the survey points and updating the well path curve with the digital data. ***Without actual survey data generating the well path curve this layer will not work correctly.***

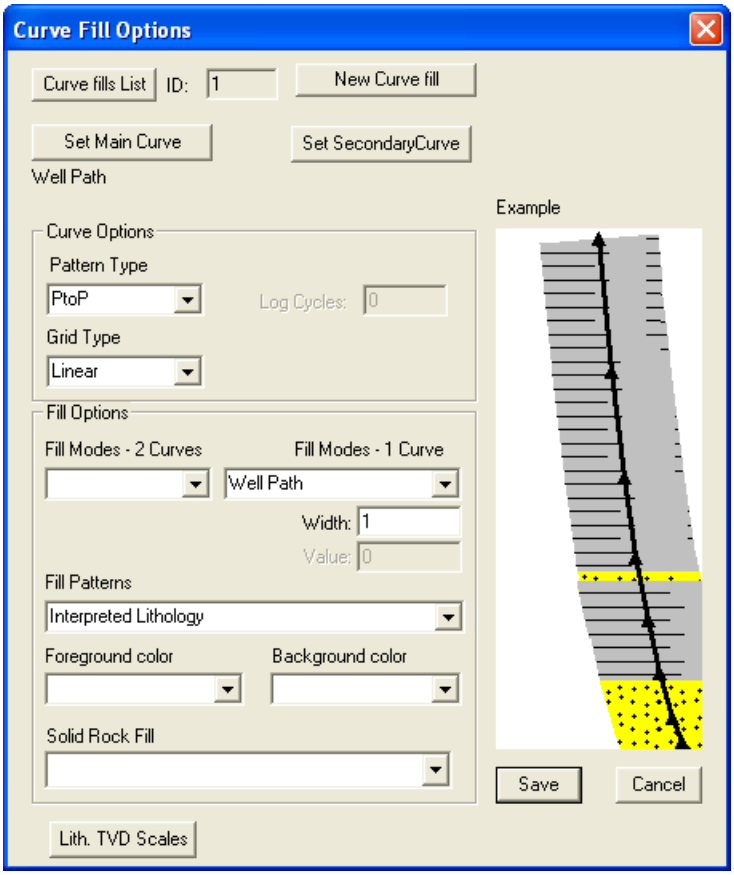
Once the curve fill layer has been added to your log the user can now utilize the curve fill layer. To set the Curve Fill Options the user must first make the Curve Fill Layer active. To do so the user must **click** on a **track** containing the Curve Fill layer and then selecting the given **Curve Fill** layer from the **Layer Selection List** field at the far left of the **Selection Bar**.

1. **Double click** anywhere within the **Curve Fill or** layer to activate the **Curve Fill Options** window.
2. **Click** on the

button. This will activate a list of curves associated with this well.
3. **Click** on the **Well Path** curve name to use so that it gets listed in the upper portion of the window and then **click** on the

button or **double click** on the **Well Path** curve that has been generated by the survey data. You will now view the curve name below the

button.

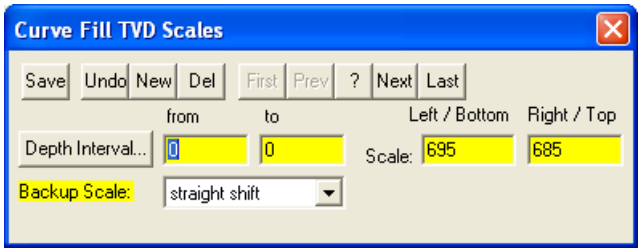


Curve Options Portion of the Window. This information is pertaining to the Main Curve and its Curve attributes.

1. **Click** on the **Pattern Type** down arrow and **select** the correct **curve pattern** for the main curve. The default is PtoP (Point to Point).
2. **Click** on the **Grid Type** down arrow and **select** the correct **curve grid type** for the main curve. The default is Linear.

Fill Options Portion of the Window (1 Curve)

3. **Click** on the **Fill Modes – 1 Curve** down arrow and **select** the **Well Path** from these options.
4. **Type** in the **Width field** how wide (in inches) you want the fill to be surrounding the well path curve. Example: If (1) is type into the width field then the fill will be ½" either side of the curve.
5. **Click** on the **Fill Patterns** down arrow and **select Interpretive Lithology**.
6. **Click** on the Lith. TVD Scales **button**. This will activate the Curve Fill TVD Scales window.



7. Type in **the Bottom and Top scales** in their appropriate fields. Leave the depth interval from and to @ 0's. ***This scale has to be the same scale utilized on the well path curve on your horizontal log***.

8. **Click** on the Save **button.** This will activate the **Shortcut Options** window. **Click** on the Exit **button**.

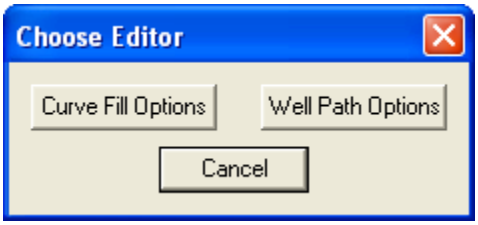
9. **Click** on the Save **button** in the Curve fill Options window**.** The window will close and the changes you have made will be reflected on the layer.

Well Path Curve Fill Layer – Bedding Angle Contacts builder

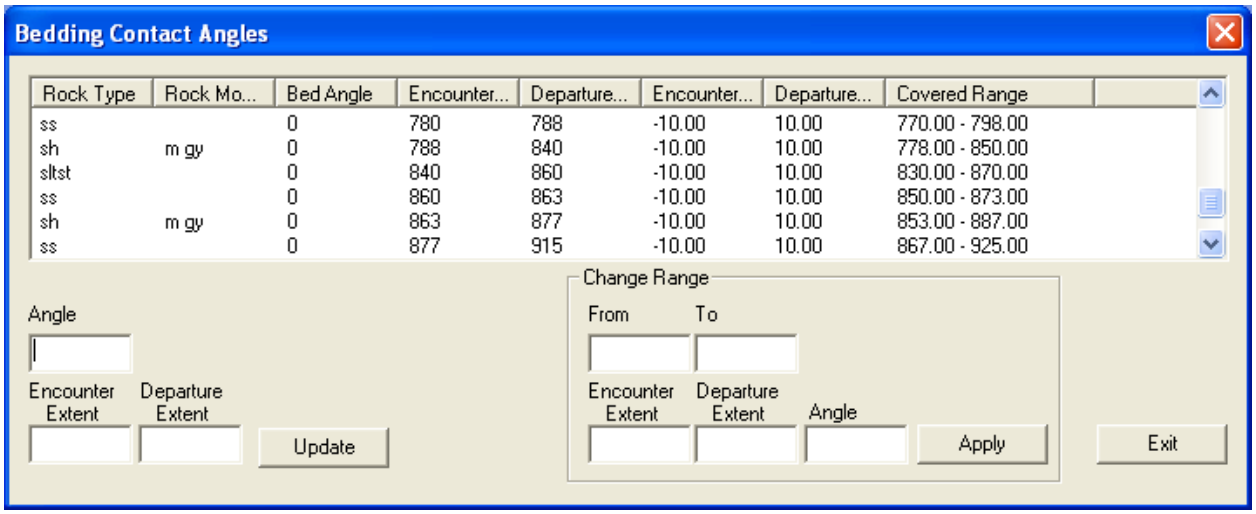
Once the curve fill layer has been customized to be a well path single curve option as described above to get to the builder the user must first make the Curve Fill Layer active. To do so the user must **click** on a **track** containing the Curve Fill layer and then selecting the given **Curve Fill** layer from the **Layer Selection List** field at the far left of the **Selection Bar**.

Single Value Data Entry

1. **Double click** anywhere within the **Curve Fill or** layer to activate the **Choose Editor** window.



2. **Click** on the Well Path Options **button**. This will activate Bedding Angle contact window. This window displays the lithology data that has been entered through the Interpretive Lithology builder with the default setting in this window as 0 degrees bedding angle and a plus minus (departure encounter) of 10 meters.



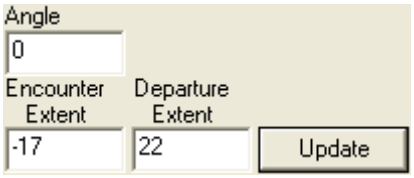
Mouse Pointer method

3. To modify a single bed the user can either **click on the bed within the layer**. The bed outline will change from red to blue when selected and will also be highlighted with a grey color in the builder.

4. **Hold** the **CTRL Key down** on the keypad and **click on the corner or end boundary of the bed** This will result in an ⤢ or ↔ cursor arrow and click and drag it in a certain direction. You will see the outline of the bed follow your mouse. When released the bed will draw an area surrounding the curve within the boundaries defined by the box with the width as specified in the curve fill option window.

Keypad Method

5. To modify a single bed the user can either **click on the bed within the layer or in the builder**. The bed outline will change from red to blue when selected and will also be highlighted with a grey color in the builder.



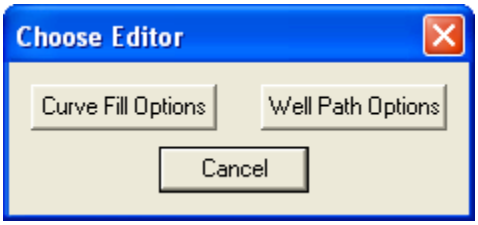
6. Here the user can change the **type** in a new bedding angle + or – to change the angle of dip as well as the extents with a (–) negative number in the Encounter Extent to further the bed to the left or a (+) positive number in the departure field to further the bed to the right.

7. **Click** on the

button. The bed outline will be drawn in an area surrounding the curve within the boundaries defined by the data entered in the fields.

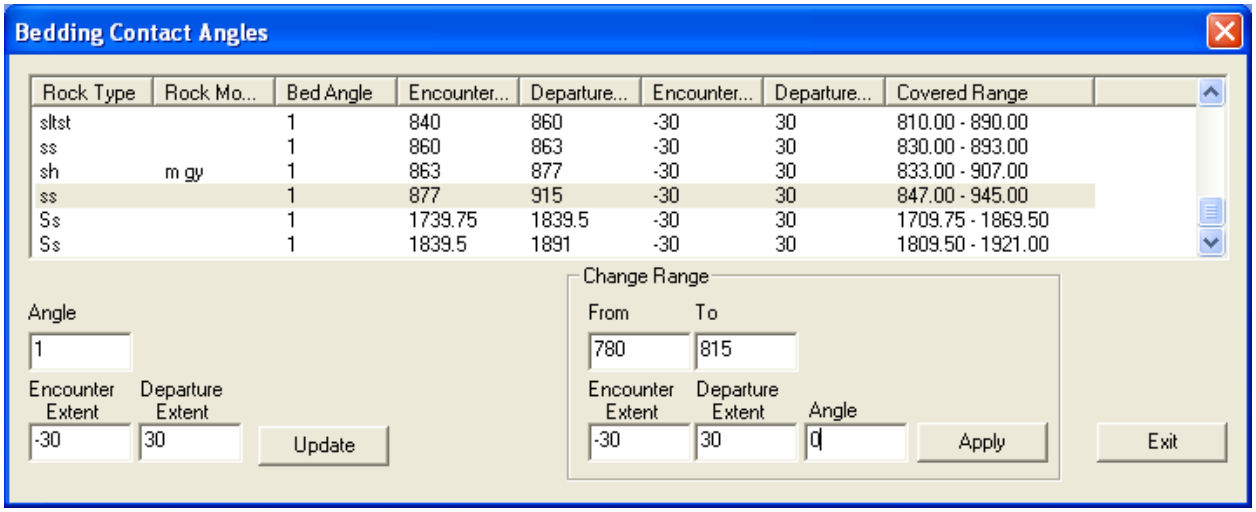
Multiple Value Data Entry

1. **Double click** anywhere within the **Curve Fill or** layer to activate the **Choose Editor** window.

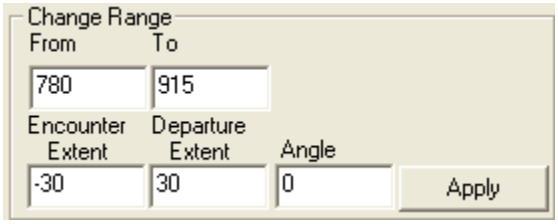


2. **Click** on the

button. This will activate Bedding Angle contact window. This window displays the lithology data that has been entered through the Interpretive Lithology builder with the default setting in this window as 0 degrees bedding angle and a plus minus (departure encounter) of 10 meters.



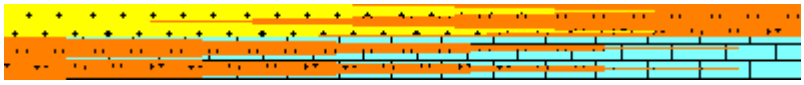
3. To modify multiple beds at once the user must **Type in** the range of the beds as defined in the interpretive lithology builder (this must cover the entire interval of the bed) in the From and To fields that users wish to modify.



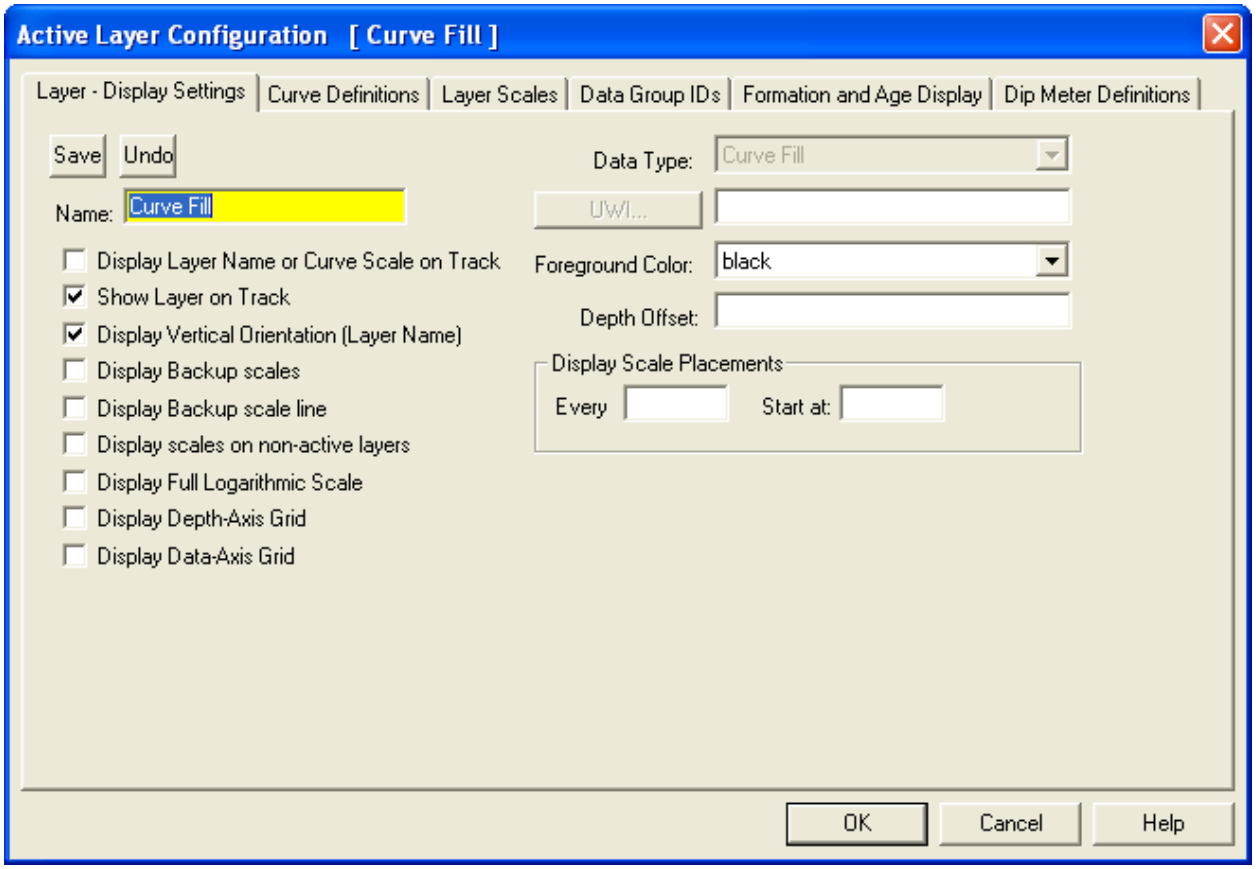
4. The user can change the **type** in a new bedding angle + or – to change the angle of dip as well as the extents with a (–) negative number in the Encounter Extent to further the bed to the left or a (+) positive number in the departure field to further the bed to the right in their appropriate fields.

5. **Click** on the Apply **button**. The beds outlines will be redrawn in an area surrounding the curve within the boundaries defined by the data entered in the fields.

Note. When two beds intersect each other on this layers presentation they will be drawn with an interfingering pattern as shown below.

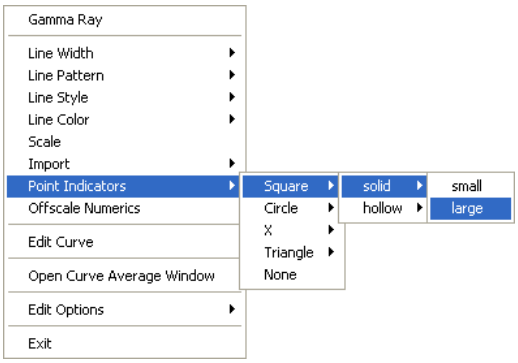


Note: When you add any layer to a log, it is always associated with a **Data Type**. Every data type in **Power*Log / Core & Curve** has a default setting. The default settings for a **Curve fill** layer are shown below. To access this window, **click** on the **Layer Configuration button** on the **Toolbar**, when the layer is active.



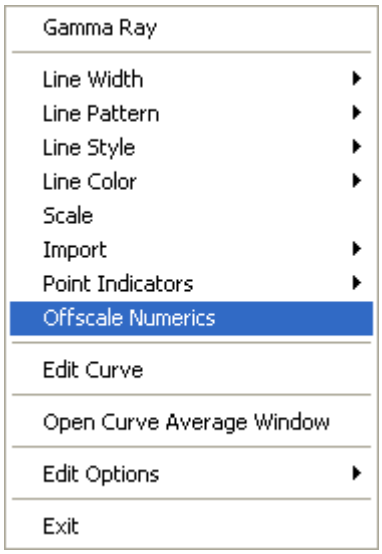
New - Right Click Curve Option for Point Indicators to Display in Track Header

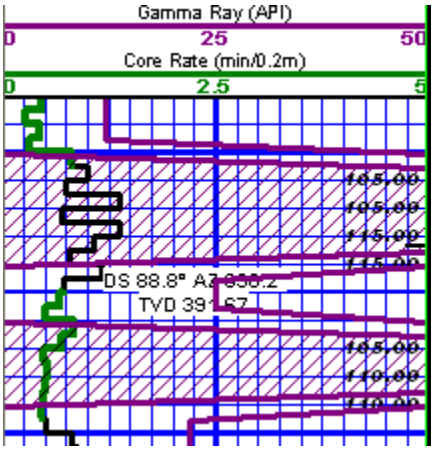
The **Point Indicators** Selection indicates where the data points on the curve are being drawn with. This field is changed by right clicking on an active curve layer, moving the mouse pointer over the Point Indicators selection and clicking on any of the pop out menu selections**. New If the point indicators are turned on these will also presented in the Track header.**



New - Right Click Curve Option to Display Off scale values on the layer

The **Offscale Numerics** Selection allows the user to view the values of any curve that wraps itself off scale on the double wrap. These fonts can then be modified in the System options under the Font tab





New - Right Click Curve Option Change Scale Line Color

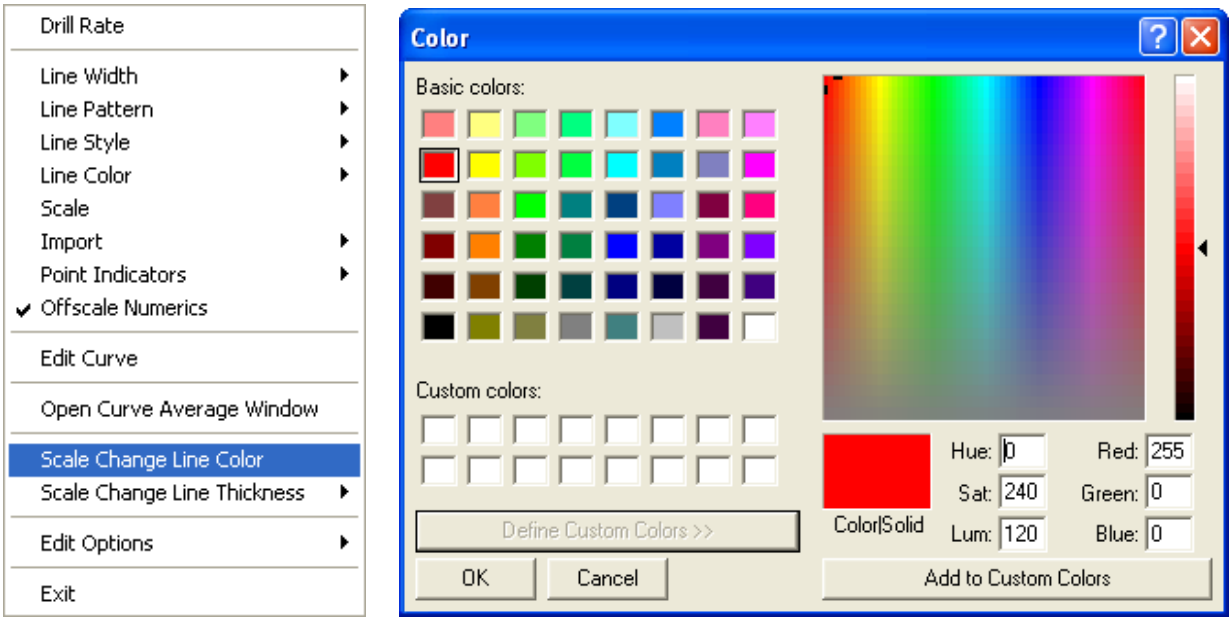
We have added the ability to indicate the depth of a curve scale change. This is represented by a solid line across the layer. We have also revised how a curve crosses the curve scale. We will now draw a curve to the curve scale line indicator depth on the previous scale and we will start the curve on the other side of the curve scale line indicator with the new scale leaving no gaps in the data represent on your log

The **Scale Change Line Color** Selection allows the user to view a scale change with a solid line color selected by the user. This scale change line is a solid line across the layer at the depth the scale change. The scale change line, to be viewed on the layer must first be initiated in the Edit Layer selection where this line can be turned on or off.

Right click on the active curve layer and **select Scale Change Line Color**. This will activate the color picker.

Select a color from the Basic color palette or use a defined custom color. **Click** on the

Button.



New - Right Click Curve Option Change Scale Line Thicknes

The **Scale Change Line Thickness** Selection indicates the width of the scale change line in pixels. To change the scale change line indicators thickness, **right click** on an active curve layer, move the **mouse pointer** over the **Scale Change Line Thickness selection** and **clicking** on a new **thickness**.